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The role of research in university teaching

A comparison of Chinese and Dutch teachers

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A comparison of Chinese and Dutch teachers

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Chapter 1

General introduction

1.1 Introduction

In keeping with the Humboldtian tradition of education through research (cf. Simons & Elen, 2007), but also answering the call of the Boyer recommendation to engage undergraduates in research (Boyer Commission, 1998), programmes and projects which strive to involve higher education students in research have flourished across the globe (e.g., Brew, 2003 in Australia; Healey, Jordan, Pell, & Short, 2010 in the UK; van der Rijst, Visser-Wijnveen, Verloop, & van Driel, 2013 in the Netherlands). This trend can be identified at both research intensive universities and at universities of applied sciences, or so-called polytechnics, *Fachhochschulen*, and vocational higher education institutions.

Higher education institutions in Asian countries, including China, are also expected, for a number of reasons, to engage undergraduates in research more and more. One reason for this is that Western educational practice is becoming overwhelmingly dominant throughout the world (Grigorenko, 2007). Another reason is ongoing educational reforms, increased research cooperation, and more frequent student exchanges between countries (cf. Dang, 2013). Universities from both the East and West thus face the same challenges with regard to how to engage undergraduate students in research. And university teachers must now contemplate and define the role of research in their teaching.

While university teachers, policy makers, and managers in higher education highly appreciate the value of close connections between research and teaching, attempts of particularly teachers to bring research and teaching more firmly together can be seen to be impeded by multiple factors. Among these factors are differences in the organization and management of the domains of research and teaching in higher education (Brew, 2010; Griffiths, 2004). The beliefs, knowledge, and practices of teachers differ for the domains of research and teaching (Visser-Wijnveen, van Driel, van der Rijst, Visser, & Verloop, 2012). The number and diversity of the population of students in higher education is increasing (cf. Scott, 2010). Furthermore, the nature of the educational systems, educational aims, and cultural contexts — particularly in Asian countries — may impede close connections between research and teaching in undergraduate education. Greater insight into these potential influencing factors, and just how university teachers — as the most direct stakeholders — deal with them is needed in their reconsideration of the role of research in university teaching.

In this dissertation the beliefs and perceptions of Chinese and Dutch university teachers about the role of research in university teaching are examined in connection with constraints on the involvement of students in undergraduate research. The beliefs and perceptions of teachers were examined because they mediate their knowledge acquisition, definitions of tasks, and actual actions (Pajares, 1992). Different beliefs and perceptions about the role of research in

university teaching may thus produce different teaching actions for the incorporation of research into teaching.

The concepts of beliefs and perceptions are complex and must therefore, as cautioned by Pajares (1992), be carefully operationalized. The key terms in this dissertation are used as follows. Teacher beliefs about the role of research in university teaching refer to what teachers believe that research *should ideally* be integrated into teaching, in short, the *ideal role* of research in teaching. Teacher perceptions of the role of research in university teaching refer to how teachers perceive the *actual* integration of research into their current teaching practices and thus the *actual role* of research in teaching.

For the sake of clarity, the total group of participants (i.e., academics and lecturers from different types of higher education institutions) are referred to as 'university teachers' or just 'teachers'.

The impetus to compare teachers from Chinese versus Dutch universities initiated from the initial inquisitiveness of the author of this dissertation, who came from China to pursue a PhD at a Dutch university. Though the primary concern is academic curiosity, there is substantial practical relevance for such a comparison. In both countries, with strongly differing educational systems, culture and history, university teachers face the same dilemmas and questions regarding the role of research in their university teaching. Thus, a comparison between these two countries is assumed to give profound insights into this theme, as this dissertation intends to show.

This dissertation focuses on a single disciplinary domain, namely, the language and culture departments of universities. This is to restrict the number of factors to take into account in the exploration. Disciplinary backgrounds of teachers have been found to strongly influence the beliefs of teachers, their curricular concerns, and their instructional practices (cf. Stodolsky & Grossman, 1995). In particular, two recent PhD research projects at the Leiden University Graduate School of Teaching (ICLON) investigated the research-teaching nexus for the Faculty of Sciences (van der Rijst, 2009) and the Faculty of Humanities (Visser-Wijnveen, 2009). Teachers from different disciplinary backgrounds were shown to have not only different definitions of research and teaching but also different perceptions of the relationship between research and teaching. In the present research, it was therefore decided to take a closer look at teachers from university language departments, which are presumably typical of the humanities.

1.2 Theoretical background

1.2.1 Defining the role of research in university teaching

The idea that research and teaching should be more closely connected in university teaching is based on several assumptions: 1) A strong connection between research and teaching communicates a particular academic identity (Robertson & Bond,

2005); 2) a strong connection between research and teaching can enhance the quality of both research and teaching (Deem & Lucas, 2007; Neumann, 1992; Robertson & Blackler, 2006; Robertson & Bond, 2001); and 3) a strong connection between research and teaching provides means to prepare students for work in a complex knowledge society, which requires research competence and continued learning (e.g., Brew, 2003; Clark, 1997; Simons & Elen, 2007).

Despite agreement on the need to bring research and teaching closer together, there is little agreement on how this should be done. Should, for example, research be brought more into teaching or, conversely, teaching brought more into research?

The emphasis in the existing research literature is on greater integration of research into teaching. Not only a research-oriented mind and the training of critical thinking are considered important for students, greater integration of research into teaching is also considered helpful for teachers to improve their teaching practices. Therefore, the focus of this dissertation is also on bringing research more into teaching or, as referred to in the remainder of this dissertation, 'integrating research into teaching'.

But what, exactly, is meant by integration of research into teaching (see Verburgh, 2013, for a similar point)? Is it to have teachers integrate their own research activity into their teaching? Or is it to confront students with research by integrating various components of the research process into teaching (e.g., have students read and criticize reports from the research literature, teach students reliable and valid research methods, have students carry out their own research projects)?

When talking about the identity of the university or other institute of higher education, bringing the research of the teachers themselves more into their actual teaching practice appears to stand central and this obviously requires the involvement of the university teachers in ongoing research. When talking about the preparation of students for dealing with the complexity of society, bringing the different components of the general research process into actual teaching practice appears to be of importance. Direct involvement of students in actual research should be central to this endeavour. In the present dissertation, it is decided to focus on the integration of the components of research into university teaching. This was done because it is already done to some extent but also because the involvement of higher education students in research has yet to occur on a widespread basis.

Most of the research literature concerned with the integration of research into university teaching, such as undergraduate research (e.g., Healey, 2005) or inquiry based learning (e.g., Brew, 2003), does not explicitly distinguish between the why of doing this and the how of doing this. Different terms were used from study to study when referring to the why of doing this; the goals, values, and expected benefits of incorporating research into teaching. Specification of the how

may occur at the micro level and thus in terms of the approaches and specific strategies used by the teachers, or at the macro level and thus in forms of student research projects or incorporating research elements in university courses (cf. Elen & Verburgh, 2008). Distinguishing between the why and how is of importance for a better understanding of research integration into teaching.

The degree of research integration into the teaching process can also vary widely. The integration can range from little involvement of the student in parts of the research process (i.e., partial integration, such as having students read and criticize research literature in a specific course), to extensive involvement of the student in the entire research process (i.e., complete integration, such as student research projects).

Within the context of this dissertation, aspects of both the why and how of integrating research into teaching — collectively referred to as 'the role of research in university teaching' — are explored. The first study, a survey study, will focus mainly on why integrating research into teaching in a partial integration context (i.e., the goals of integrating research into an undergraduate course). The second study, an interview study, will focus on why as well as on how to integrate research into teaching in a complete integration context (i.e., both the goals and approaches for the supervision of a master's thesis).

1.2.2 Investigations of the research-teaching nexus

Investigations of the so-called research-teaching nexus can be divided into two streams. On the one hand, there are qualitative studies of how academics and students think about the relationship between research and teaching (e.g., Neumann, 1992). On the other hand, there are correlation studies of the associations between research productivity and teaching quality (e.g., Hattie & Marsh, 1996). Both teachers and students hold strong beliefs in a close relationship between research and teaching (e.g., Robertson & Blackler, 2006). But in contrast, no significant empirical associations could be found between research productivity and teaching quality. For example, Hattie and Marsh (1996) reported in their meta-analysis a near-zero correlation between research productivity (i.e., publication counts) and teaching quality (i.e., student evaluations). The strong beliefs about a close relationship between research and teaching are thus not supported by the findings from these correlation studies on the research-teaching nexus.

Reflection on the discrepancy between what is reported as desired by academics and students and what can actually be confirmed about the links between research and teaching revealed two possible explanations for the differences. The first explanation reflects on the nature of the measurements conducted. In most of the previous studies either the beliefs or the actual practices of the teachers with regard to the research-teaching nexus were studied but not both. We therefore do not have the appropriate evidence to evaluate the relationship between beliefs and actual practices. This dissertation is designed to fill this gap by

exploring both what teachers believe and what they perceive as beneficial for the integration of research into their own teaching practice.

The second possible explanation for the observed discrepancy between beliefs and practices related to the research-teaching nexus is found in the assumption of the correlation studies that research and teaching are separate activities of a teacher. Thus, these studies studied the connections between research and teaching as if it were two separate activities of university teachers. What actually is missing in these correlation studies is how research activities are translated or integrated into the teaching activities. Discussions about the research-teaching nexus are therefore now more concentrated on the integration of research activities into teaching activities via — for example — forms of inquiry-based learning and the introduction of undergraduate research programmes. Both can be found in the US (Boyer Commission, 1998), the UK (Healey, 2005), Australia (Brew, 2003), and the Netherlands (van der Rijst & Visser-Wijnveen, 2011). Conceptual models of the relationship between research, teaching and student learning (cf. Brew, 2003) and models aimed at the development of curricula to foster the integration of research into teaching are available (cf. Healey, 2005), but few concrete studies on how teachers integrate research into teaching activities are available. The present dissertation aims to fill this gap by examining what teachers think about the purposes and approaches of integrating research into their teaching. It also aims to provide a picture of the actual practices with regard to the integration of research into university teaching by investigating the master's thesis supervision.

1.2.3 Eastern and Western education traditions

The assumed differences in the educational traditions between China and the Netherlands motivated the comparison conducted in the present studies. In the following, a brief overview of the similarities and differences between the two traditions is presented.

Eastern and Western educational philosophies

The educational traditions in many Eastern countries are believed to be radically different from those in the West, particularly with regard to the ultimate goals and approaches to attain these goals. Chinese and Dutch university teachers can be assumed to be two representative examples of the Eastern and Western traditions, respectively.

Educational tradition in China has been largely influenced by the philosophy and teachings of Confucius as well as the way they were practiced throughout history in the Imperial Examination (IE) system. Though Confucius describes moral education and the cultivation of benevolence as the ultimate goals of education (Niu, 2007), the IE system functioned as a tool for the government to select state officials and for individuals to improve their social status (cf. Shin,

2012). Similarly in the current Chinese education system, the National College Entrance Exam (NCEE) results are used to determine college admission, which functions as a means to foster the development of Chinese economy and also, to some extent, a way to improve the social and economic status of students. Confucius emphasized learning through reflection (Wong, 2011) and example (i.e., observing the successful experiences of one's seniors) (Yang, 1993). In the IE system, rote learning of the Confucian classics was a prevailing approach to learning (cf. Hayhoe & Zha, 2006), thus an emphasis on knowledge transmitting and memorization of the Confucius classics. Confucian philosophy was transmitted in the IE system, but has in recent years become highly valued for teaching and learning in modern society (Zeichner & Liu, 2010).

Western educational tradition is based upon the ideas of the ancient Greek philosophers and the dialogues of Socrates in particular. In this tradition, the goal of education is to pursue the objective knowledge and the means to attain this goal is to have students and teachers co-investigate an idea or standpoint via the exchange of questions and answers (i.e., critical discussion) (cf. Hummel, 1994). Western educational tradition does not take something to be true until the matter has been thoroughly examined by the learners themselves. Western educational tradition therefore emphasizes learning through empirical investigation (cf. Shim, 2008). And this perspective on teaching and learning still contributes to Western education today.

Western influences on higher education in China today

Though largely influenced by the teaching philosophies of Confucius and the IE system, the current Chinese higher education system has also seen a range of influences from the West. Starting in 1902, Western educational ideas were introduced into China (Niu, 2007). But they only greatly developed in the 1980s when the Chinese government introduced a major higher educational reform and adopted institutional models from the West (Altbach, 1989). Just as emphasis on research excellence grew in the West, a greater emphasis was placed on the promotion of research excellence in China as well (cf. Tien, 2007). This can be seen in the efforts of the government to build world-class universities and the conduct of two national projects in particular: the *211 Project* and the *985 Project*[1]. It can be expected that the staff of the universities supported in these

[1]Both projects are aimed at developing the quality and thus the reputation of Chinese higher education. The *211 Project* was launched by the Chinese government in 1993 to identify 100 universities to become research-intensive institutions. The *985 Project* followed in May 1998 when the Chinese government decided to concentrate its investment on a smaller number of universities and thereby nurture a world-class level of higher education in China. Large amounts of government funds were thus allocated to the selected universities to build research centres, improve facilities, hold international conferences, attract world-renowned faculty, host visiting scholars and help Chinese faculty attend conferences abroad (Altbach, 2009; "International Rankings and Chinese Higher Education Reform", 2006; Hayhoe & Zha, 2006).

projects are as "internationalized in outlook and experience as those in major Western universities" (Hayhoe & Zha, 2006, p. 685).

Western scientific output and publications in academic journals also contributed to the influence of Western thinking on Chinese higher education (cf. Altbach, 1989). Publication in top-level Western journals is quickly becoming the standard of academic excellence for Chinese universities and is closely associated with the career progress of academics (cf. Bai, Millwater, & Hudson, 2012).

In light of the current situation at Chinese universities, it can thus be expected that Chinese teachers will face the same task as teachers from the West at some point and thus be required to engage in the international drive to involve higher education students in research. Both teachers in the East and West are having to re-think their roles as teachers and the role research should play in their teaching. And in doing this, the university teachers will presumably take their specific social-cultural, political and economic circumstances into consideration.

1.2.4 The relevance of beliefs about teaching

How teachers think about the role of research in teaching is likely to be influenced by what they believe about teaching in general. Brew (2003) has argued that the way in which teachers perceive the nature of research, teaching and knowledge will presumably affect the way in which they bring research and teaching together. Visser-Wijnveen, van der Rijst and van Driel (2012) found that particularly the way in which teachers conceptualize teaching (i.e., their beliefs about teaching) correlates most strongly with the way in which they perceived the relationship between research and teaching.

Specifically with regard to teachers' beliefs about teaching, two general categories of beliefs (i.e., orientations towards teaching) have been discerned in current studies: Information transmission/teacher-focused and conceptual change/student-focused (e.g., Belo, van Driel, van Veen & Verloop, 2014; Denessen, 1999; Kember, 1997; Samuelowicz & Bain, 1992, 2001; Trigwell & Prosser, 2004; van Veen, Sleegers, Bergen, & Klaassen, 2001). When we consider the differences in the educational philosophies and traditions of the East and the West, it is intriguing to see whether these differences can be found in teachers' current beliefs about teaching. Therefore, it is interesting to analyse how these two general categories of beliefs about teaching may shape the thinking of teachers from Chinese and Dutch universities about the incorporation of research into their teaching. This point also underpinned the selection of China and the Netherlands for the comparison.

1.2.5 The relevance of institutional context

The way in which teachers embed research into teaching can also be affected by the institutional context. This is because individual learning, thinking and behaviour are assumed to be affected by the structural factors within the institution

(e.g., time, resources, workload, evaluation and feedback procedures, institutional policies) and cultural factors within the institution (e.g., shared school vision, collaborative culture, professional learning climate, professional capacities and collective decision-making) (cf. Imants & van Veen, 2010; Little, 2012; Smylie, 1995). Marsh and Hattie (2002), but also others (cf. Griffiths, 2004; Robertson & Bond, 2001), have similarly argued that institutional context is likely to mediate the relationship between research and teaching.

To investigate how the structural and cultural conditions may influence the thinking of teachers about the role of research in teaching, teachers at research universities (RU) are compared with their counterparts at universities of applied sciences (UAS). The binary higher education system in the Netherlands differentiates between RU and UAS particularly with regard to the aims, content and status of research within the institutions (cf. de Weert, 2006). As a result, RU and UAS are also organized differently in the Netherlands in terms of teaching content, resources, workloads, evaluation of functioning and policies regarding teaching: RU focus more on science and research while UAS focus more on practice and teaching (Harwood, 2010). The Dutch context is thus assumed to be particularly relevant for exploring how the structural and cultural characteristics of an institution affect the beliefs of teachers about the role of research in teaching but also the way in which they integrate research into their actual teaching practices.

1.3 Outline of the dissertation

1.3.1 Research questions and the design

There is the need to re-consider the role of research in university teaching against the growing emphasis on research and the call for student involvement in research in particular. Detailed empirical evidence about how university teachers think about the role of research, how they actually integrate research into their own teaching, and in particular how they cope with barriers deriving from the individual (i.e., beliefs about teaching as information transmission versus conceptual change, research experience, research training), the institutional (i.e., research-oriented versus vocation-oriented institutions), and social-cultural (i.e., East versus West) backgrounds is not available.

In relation to the cultural backgrounds, this dissertation examines the role of research in university teaching in an Eastern country, namely China, and a Western country, namely the Netherlands, related to the very different educational traditions, but also different socio-economic conditions between the two countries. Such comparisons can possibly expand the knowledge regarding the role of research in university teaching in general. Such comparison may also help to gain insights into the mediation of the role of research in university teaching by the differing educational traditions in particular. By comparing two countries with strong differences in their educational environments, it is possible to identify latent

facilitators and constraints that are invisible to a single educational setting. In addition, findings from such comparison can presumably help reduce the difficulties of functioning for both teachers and students from one country when in another country (cf. Hofstede, 1986). Understanding the teaching practices of Chinese teachers, for example, can help Dutch teachers to better understand Chinese and other Asian students attending a Dutch university.

Thus, the main interest of this dissertation concerns *the beliefs and perceptions of Chinese and Dutch university teachers regarding the role of research in university teaching, and how these beliefs and perceptions can be explained by their cultural, institutional and individual background characteristics.*

A survey study and an interview study are conducted to answer the central research question. The survey study — reported in Chapters 2, 3 and 4 — is designed to gain a general overview of the beliefs regarding the role research should play in their teaching and their perceptions of the role research actually plays in their teaching of Chinese and Dutch university teachers. The contributing factors to those beliefs and perceptions will be investigated. The interview study — reported in Chapter 5 — is designed to describe a concrete picture of the actual practices of Chinese and Dutch university teachers in relation to the role of research in teaching, for which an example of complete integration of research in teaching is chosen, namely the supervision of the master's thesis.

In Figure 1.1, an overview of main theoretical perspective taken within the context of the present research on the integration of research into teaching is provided. Figure 1.2 provides an overview of the four empirical chapters presented in this dissertation.

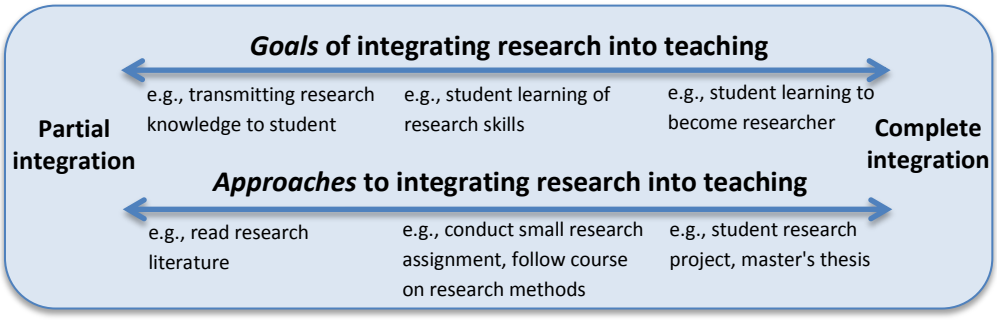

Figure 1.1. Overview of the main theoretical perspective on the integration of research into teaching

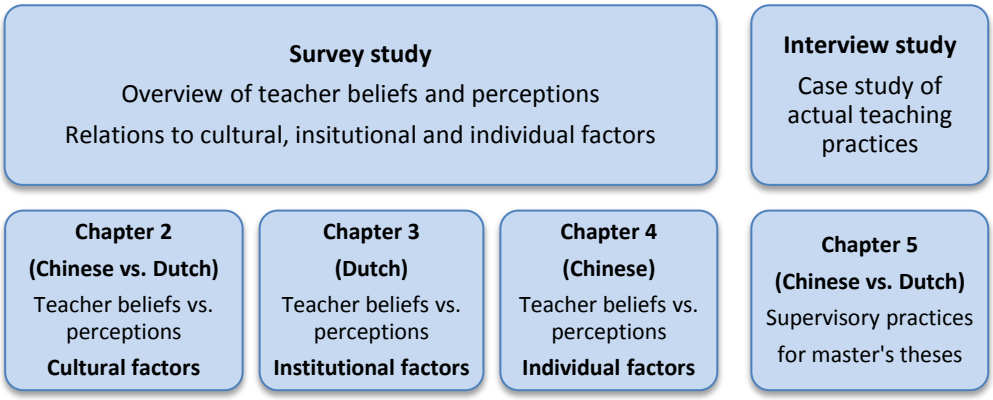

Figure 1.2. Overview of the survey study (Chapters 2-4) and interview study (Chapter 5)

1.3.2 The survey study

A questionnaire is used in the survey study (Chapters 2-4) to gain a general overview of the goals of university teachers to integrate research into their teaching, namely, teacher beliefs (i.e., the ideal) and teacher perceptions (i.e., the actual) regarding the role of research in university teaching. In all three chapters, the beliefs of the teachers are compared to their perceptions and a selected number of cultural, institutional or individual factors (depending on the chapter) are considered in doing this. Chapter 2 (the influence of cultural factors), reports on both the Chinese and the Dutch data, then Chapter 3 (the influence of institutional factors) and Chapter 4 (the influence of individual factors) on the Dutch and the Chinese data respectively. Chapters 3 and 4 help unravel issues not addressed in Chapter 2 and thus further our understanding of the comparative findings found in Chapter 2. In the following, the three chapters reporting on the survey study are described in greater detail.

Chapter 2 reports on the beliefs versus perceptions of teachers from Chinese versus Dutch universities. The main focus is on a culture related factor (i.e., teacher beliefs about teaching in general). This chapter also reports on a number of individual factors including years of research experience, years of teaching experience, educational background, study abroad experience and types of courses taught.

The Chinese (n = 152) and Dutch (n = 132) university teachers are compared. This is done because China and the Netherlands have distinctive education philosophies, thus distinctive beliefs about teaching in general. The specific research questions of this chapter are:

- What are Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching?
- What are Chinese and Dutch university teachers' perceptions of the actual role of research in their teaching practice?
- How do Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching correspond to their beliefs about teaching in general?
- How do Chinese and Dutch university teachers' beliefs about and perceptions of the role of research in their teaching relate to their backgrounds?

Chapter 3 reports on the beliefs versus perceptions of teachers from Dutch universities (i.e., the research universities and the universities of applied sciences), with a focus on the role of institutional factors (i.e., the research cultures and research support provided in the research-oriented versus vocation-oriented institutions). Three individual factors are also considered in relation to the teachers' beliefs and perceptions: educational background, years of research experience and time spent doing research.

This chapter reports only on the data of the Dutch university teachers (n = 132). The Dutch sample is particularly relevant for investigating in this regard because the RU and UAS in the Netherlands strongly differ from each other, particularly with regard to the aims, content and status of research within the institutions (cf. de Weert, 2006). Because the institutions differ in such a way from each other, the Dutch sample is assumed to be an adequate example to explore how structural and cultural characteristics of the institutes affect the beliefs and perceptions of teachers about the role of research in their teaching. The following specific research questions are addressed in this chapter.

- What do teachers at research universities and universities of applied sciences believe about the ideal role of research in university teaching?
- How do teachers at research universities and universities of applied sciences perceive the actual role of research in their teaching practice?
- How do the perceptions of university teachers regarding the actual role of research in teaching relate to their institutional and individual backgrounds?

Chapter 4 reports on the beliefs versus perceptions of teachers from Chinese universities with a focus on individual factors (i.e., time spent doing research, research experience, learner type, study abroad). A crucial institutional background factor is also taken into consideration (i.e., employment at a research intensive versus non-research intensive institution) in addition to self-reported constraining factors.

Just how the Western idea of integrating research into teaching has been adopted and adapted within the context of Asian higher education is analysed for a

Chinese sample of teachers (n = 152). Chinese higher education has a different educational system, different educational aims and different curricular designs than Western higher education, and this is expected to create tensions for the adoption of Western ideas. A deeper understanding of the beliefs and perceptions of Chinese teachers is also expected to facilitate our interpretation of the findings reported in Chapter 2. The specific research questions addressed in this chapter are as follows.

- How do teachers' beliefs about the ideal role of research in teaching relate to their perceptions of the actual role of research in their teaching practice?
- How do teacher individual background variables relate to their perceptions of the actual role of research in their teaching practice?

1.3.3 The interview study

An interview study (Chapter 5) is designed to provide a qualitative in-depth picture of how university teachers perceive the goals of integrating research into teaching and the approaches used to integrate research into their actual teaching practices. Semi-structured interviews are conducted with ten Chinese and ten Dutch master's thesis supervisors. They are asked about the intended learning outcomes (goals of integrating research into teaching) and the support provided to their students in their actual supervising practice (i.e., approaches to integrating research into teaching).

Master's thesis supervision is particularly well-suited for studying the integration of research into teaching for three key reasons. First, master's thesis supervision is relatively well-established in both China and the Netherlands, which means that the practices followed are more comparable than the practices followed for other types of research integration approaches into teaching that are still developing (e.g., undergraduate research projects; research method courses). Second, it embraces a large variety of goals and approaches of research integration into teaching; research is more fully integrated in master's thesis supervision than in most other types of research integration into teaching (undergraduate thesis, research method courses, etc.). Third, it constitutes an ideal situation where the influence of the various constraints are less prominent. Master's thesis supervisors are well-trained to do research during their PhD work. They are experienced researchers and were allocated time to do research as part of their position which means that the influence of potentially confounding factors is restricted. The sample is from research intensive universities. Thus lack of time, lack of research training, lack of research experience, absence of a research culture and absence of research support can be expected — for example — to play a relatively smaller role for master's thesis supervisors in their actual integration of research into their teaching practice. The research questions of this chapter are:

- What learning outcomes do Chinese and Dutch supervising teachers want their master's students to achieve through a master's thesis?
- How do Chinese and Dutch supervising teachers support their master's students to achieve these learning outcomes?

In Chapter 6, an overview of the observed similarities and differences in the beliefs and perceptions of the Chinese and Dutch teachers in the survey and interview studies is presented. Based on the results, this dissertation ends with the conclusion that the beliefs and perceptions of Chinese and Dutch university teachers are more alike than different with regard to the importance of integrating research into teaching. A similar gap is detected between their beliefs about the ideal integration of research into teaching and their perceptions of the actual integration of research into teaching. But teachers from China versus the Netherlands face different constraints stemming from their different cultural, institutional and educational backgrounds.

To close, the strengths and limitations of the presented studies are reported in addition to some directions for future research and practical implications for enhancing the integration of research into teaching in both Chinese and Dutch higher education.

Chapter 2

The role of research in Chinese and Dutch university teaching: How does the cultural background matter?[2]

[2] This chapter has been accepted for publication in an adapted form as:
Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (2014). 'And never the two shall meet'? Comparing Chinese and Dutch university teachers about the role of research in teaching. *Higher Education.* doi: 10.1007/s10734-014-9734-0.

Abstract

During the past decades, university teachers from both the East and the West have been increasingly called to involve their students in research, therefore they have to rethink not only their research and teaching practices but re-evaluate the role of research in their ongoing teaching. Thus, a survey was conducted to 1) what Chinese and Dutch university teachers believe the role of research should be in their teaching, 2) how they perceive their actual incorporation of research into their current teaching practice, and 3) how their beliefs about the role of research relate to their beliefs about teaching. Altogether, 284 university teachers from China and the Netherlands participated in the study. One striking result was that the Chinese and the Dutch university teachers were similar in several ways. They both highly valued the role of research in teaching in an ideal situation, and reported significantly lower scores on how well they have actually incorporated research into their current teaching practice. However, despite all similarities, the Chinese teachers were also found to be different from the Dutch teachers: They scored lower on how much they valued the ideal role of research, how well they could incorporate research into their actual teaching practice, and how much they agreed with teaching as conceptual change and focusing on an active role of the student. In general, the differences between the Chinese and the Dutch teachers may have their roots in Confucian versus Western educational philosophies, respectively, and the similarities identified perhaps reflect the Western influence on Asian higher education.

2.1 Introduction

The relationship between research and teaching has become an area of academic debate in several Western higher education contexts (cf. Deem & Lucas, 2007; Healey, 2005). After some unsuccessful attempts at demonstrating the relationship between research productivity and teaching quality (e.g., Hattie & Marsh, 1996), researchers have begun to take different approaches to investigating the way research and teaching are related. One of these attempts can be seen in a drive to involve university students in research- or inquiry-based learning, which has become a prominent feature of undergraduate programs in several Western countries, including the US (Boyer commission, 1998), UK (Healey, 2005), Australia (e.g., Brew, 2003), and the Netherlands (van der Rijst & Visser-Wijnveen, 2011). The popularity of this idea is based on the following assumption:

> *Research activity can and does serve as an important mode of teaching and a valuable means of learning.[….] student involvement in research is an efficacious way to educate […] the great mass of students, as well as the elite performers, for the inquiring society into which we are rapidly moving* (Clark, 1997, p. 242).

In other words, research could be a way of teaching that can accommodate the diversification of students' backgrounds, and a way of learning that prepares students for the complex world. It can be assumed that this trend will spread to the Asian countries, including China, because, as (Grigorenko, 2007) states, the Western educational practice is becoming overwhelmingly dominant throughout the world.

However, it is unclear how Asian and Western university teachers can tackle the issues arising from this process. For example, Asian university teachers may need to consider how to incorporate the idea of research-led teaching into their existing teaching practice, against their own social and cultural contexts and their different views towards teaching deriving from the Confucian heritage (cf. Altbach, 2009; Hayhoe & Zha, 2006). Western university teachers may need to search for new ways to balance research and teaching in response to a diversification of student backgrounds, due particularly to the influx of international students from different social, cultural, and educational backgrounds from Asian countries.

It seems that both Asian and Western teachers are struggling with the same issue regarding the relationship between research and teaching, and so it becomes interesting to explore the similarities and differences between them. Our study is situated in one Asian country, namely China, and one Western country, namely the Netherlands. The aim of this study is to explore Chinese and Dutch university teachers' beliefs about what the ideal role of research in university teaching should be, their perceptions of how well they have incorporated research into their actual teaching practice (for which the term perceptions is used instead of beliefs), and how their beliefs about the ideal role of research relate to their beliefs about teaching in general.

2.2 Theoretical background

2.2.1 Research-teaching nexus and teaching in general

"Different ideas about the nature of research, scholarship, teaching and knowledge may have different consequences for how we bring teaching and research together" (Brew, 2003, p. 5). Teachers' beliefs about the relationship between research and teaching may be mediated by their beliefs about teaching and research in general, and according to some recent studies, it is particularly teachers' beliefs about teaching in general that correlate most strongly with beliefs about the relationship between research and teaching (Visser-Wijnveen, van der Rijst, & van Driel, 2012). Therefore, it is interesting to investigate further how these beliefs about teaching in general may relate to teachers' beliefs about the relationship between research and teaching.

With regard to studies on teachers' beliefs about teaching in general, several studies have reported a variety of beliefs about teaching (e.g., Samuelowicz & Bain, 1992, 2001), but these studies have also uncovered two general categories of teaching style: information transmission/teacher-focused and conceptual change/student-focused (e.g., Belo et al., 2014; Denessen, 1999; Kember, 1997; Samuelowicz & Bain, 1992, 2001; Trigwell & Prosser, 2004; van Veen et al., 2001). Our study aimed to explore whether these two general beliefs about teaching may affect how teachers think about incorporating research into their teaching.

2.2.2 Western teaching ideas and Confucian heritage

The Asian education tradition, which has been influenced largely by Confucius' teaching philosophy, is believed to be distinctively different from the Western education tradition in terms of its ultimate goals and the means to achieve those goals. The distinctive nature of the two teaching traditions may provide a clear picture of the way how beliefs about teaching in general may mediate the relationship between research and teaching. In our study we chose Chinese and Dutch university teachers as examples of the Asian and Western education traditions.

The influence of the ancient Chinese educator, Confucius, is deeply embedded in the Eastern culture, and China in particular. As can be read in Analects of Confucius, Confucius saw moral education and the cultivation of benevolence as the ultimate goals of education (Niu, 2007), and emphasized the importance of knowing though reflection (Wong, 2011) and through emulating one's seniors, who achieved supremacy of virtue and intellectual development first (Yang, 1993). He considered the role of teachers to be that of co-investigating with their students instead of simply transmitting knowledge (Shim, 2008), and emphasized the importance of teaching according to students' abilities and

characteristics (Zeichner & Liu, 2010). Unfortunately, the traditional Chinese education derived from his teaching, particularly the Imperial Examination system (IE), consisted primarily of rote learning and memorization of the Confucian classics, and the exam results were used to appoint high-ranking officials (cf. Altbach, 2009; Hayhoe & Zha, 2006; Niu, 2007). Thus, traditional Chinese education narrowed its focus almost exclusively on the final product and the content of the Confucian classics. This tradition lasted for over a 1,000 years, and still has a significant impact on modern Chinese education (Niu, 2007) as represented in the National College Entrance Exam (NCEE). The NCEE results are used to determine college admissions, which have immediate consequences for the social and economic status of the students upon their graduation. Only during the twentieth century, under Western influence, did Confucius' teaching philosophies regain attention (Xiong, 1983, quoted in Niu, 2007), and have become highly valued for teaching and learning in modern society (Zeichner & Liu, 2010). It can be concluded that modern Chinese education developed under the influence of not only Confucius' philosophies, but also of the way they were practiced throughout history.

An early basis for Western educational traditions can be found in Socratic dialogues, in which teacher and students cooperate in the pursuit of objective knowledge through a robust exchange of questions and answers (cf. Hummel, 1994). The opening dialogue in *Meno* between Socrates and his student indicates that the teacher cannot or does not pass certain information in response to a student's question, but investigates an idea or concept together with the learner. He encourages his learners to explain their own ideas, which will ultimately lead to the correction of a wrong idea through discussion (Shim, 2008). To his student Plato, learning is the reasoned understanding of causes through what one already knows, in a gradual process, without hasty and compulsory leading on the part of the teacher (Shim, 2008). The Socratic method also highlights the necessity of having a matter investigated by the learners themselves rather than having them rely on hearsay. Learning through empirical investigation and observation was subsequently also emphasized by Aristotle. Influences from the Socratic method may have remained in modern Western education. The critical aspect is also stressed in more recent approaches to understanding teaching: Freire, for example, suggests the problem-driven educational system, in which teachers critically investigate a problem together with their students (Shim, 2008).

Western education, influenced by ancient Greek philosophers, holds an analytical view of the world, typically characterized through empirical investigation (Zhao, Zhang, Yang, Kirkland, Han, & Zhang, 2008), and do not assume something is true before the matter has been examined by the learners themselves. This Platonian/Aristotelian notion is radically different from the introspective Confucian tradition, which focuses more on emulating the master. Thus, it is interesting to see whether these fundamental differences may influence

teachers' current beliefs about teaching, and consequently their ideas about the relationship between research and teaching in universities.

2.2.3 Western ideas in Chinese higher education

Higher education in China has been influenced by the Confucian heritage as well as by a range of foreign influences over time. Western educational practice has become overwhelmingly dominant throughout the world (Grigorenko, 2007), including China. Western educational ideas were first introduced to China in 1902 (Niu, 2007); during the military conflicts the Qing government recognized the scientific and technological advances of the West. Later, in the 1980s, after the unsuccessful try-out of the Soviet model and a Chinese 'go it alone' approach to higher education, China again looked toward the West for ideas and launched a significant higher education reform (Altbach, 1989). Western institutional models were adopted, and adapted to the local context of China's higher education (cf. Altbach, 1989; Shin, 2012). Moreover, in the 1990s the government launched the *211 Project* and *985 Project* (see footnote on page 16 for a description), intended to build research universities in China (Hayhoe & Zha, 2006; Altbach, 2009). Universities supported by these projects seek to emulate especially the top research universities in the US. Through these projects, large numbers of university graduates and staff members are sent to study at Western universities, and scholars and professors from the West are frequently invited to Chinese universities (Altbach 2009). Therefore, "the faculty in China's top universities are now as internationalized in outlook and experience as those in major Western universities" (Hayhoe & Zha, 2006, p. 685).

Another way in which Western ideas may have influenced China's higher education relates to the high presence of Western scientific output, particularly textbooks and academic journals (cf. Altbach, 1989). China also respects Western academic journals as the standard of academic excellence. As Altbach put it: "contemporary scientific culture is basically Western — done in the West and communicated in Western languages. Most of the rest of the world recognizes that they must accommodate to this reality" (p. 27). In China, publications in top-level Western journals have become one of the most important factors for academic advancement.

Therefore, with respect to the discussion about the relationship between teaching and research in the West, it is not surprising that teachers from China face the same questions of how to relate research and teaching in their specific cultural, historical, political, and economic conditions. Comparing Chinese and Western teachers could yield a deeper understanding of the variety of the relationship between research and teaching in Asian and Western countries.

2.3 Research questions

- What are Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching?
- What are Chinese and Dutch university teachers' perceptions of the actual role of research in their teaching practice?
- How do Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching correspond to their beliefs about teaching in general?
- How do Chinese and Dutch university teachers' beliefs about and perceptions of the role of research in their teaching relate to their backgrounds?

2.4 Method

2.4.1 Participants

Our survey study was conducted among Chinese and Dutch university teachers working at language and culture departments. Chinese universities, mainly in a metropolitan city of Southwest China, and Dutch universities were selected on the basis of our analyses of teaching and research practice, and feasibility of data collection.

Our sample included Chinese and Dutch university teachers who were already involved in research, as well as those who actually had a strong focus on teaching but were less involved in research at the time. We expected that also including teachers who have a strong focus on teaching would give us an overview of all teachers' beliefs about the role of research in teaching, not only of those university teachers actually involved in research. Though a positive link between research and teaching is still questioned in debates about the teaching-oriented institutions, the idea that research is relevant for teaching is nevertheless spreading worldwide, teachers who are not currently involved in research may in the near future also be confronted by the difficulties related to strengthening the research-teaching nexus.

We received 284 valid responses in all, with 152 Chinese (response rate: 39%), 132 Dutch (response rate: 44%). As to the type of institutions where teachers work, 54 out of 152 Chinese teachers (36%) are from universities supported in the *985 Project*, which are comparable to the 'research universities' in the Netherlands. Among the 132 Dutch participants, 41 (31%) are from research universities, and 91 from universities of applied sciences. Although the institutional background may influence teachers' beliefs, our study was aimed at exploring the general differences and similarities between the Chinese and the Dutch teachers, and therefore we did not distinguish between teachers from different types of institutions, especially because the percentage of teachers from research universities is about the same for the Chinese and the Dutch subsample.

Table 2.1
Chinese and Dutch university teachers' backgrounds

		Chinese (n = 152)	Dutch (n = 132)
Gender	Male	49	40
	Female	98	90
Age	30 and under	35	10
	31–35	42	15
	36–45	54	31
	46–55	17	44
	56 and above	2	31
Educational background	Bachelor's	24	4
	Master's	117	95
	PhD	7	26
Research experience (years)	less than 1	10	22
	between 1–3	31	53
	between3–5	32	16
	between 5–10	43	12
	between 10–15	15	13
	more than 15	16	15
Teaching experience (years)	less than 5	33	11
	between 5–10	33	14
	between 10–15	40	22
	more than 15	43	82
Course type	Non research focused	124	73
	Research-focused course	8	22
	Both	16	32
Study abroad	no	92	52
	yes	56	79
Teaching abroad	No	125	87
	yes	19	44

The number of female teachers was roughly twice that of male teachers in both the Chinese and the Dutch universities. The Chinese respondents belonged to a younger age group than the Dutch university teachers. Dutch respondents on the whole had higher final educational degrees, and more years of teaching experience, but fewer years of research experience than Chinese respondents. As for the types of courses taught, most Chinese teachers were teaching *College English*, a compulsory course for all university students from various disciplines. This type of course often involves less research activities and research-related course material.

Of the Dutch teachers, on the other hand, 43% were teaching courses that are generally more related to research (e.g., linguistics, philology, literature and culture, didactics). More Dutch than Chinese teachers had experience in studying and teaching abroad. Those Chinese teachers who did spend time abroad often went to the US, UK, Canada and Australia for about three to twelve months. Dutch teachers mostly stayed abroad for about twelve months, some more than five years, and went to both Western and Asian countries. Detailed background information about the respondents can be found in Table 2.1.

2.4.2 Design of the instrument

The questionnaire was adapted from a previously validated questionnaire (van der Rijst, Visser-Wijnveen, Verstelle, & van Driel, 2009; van der Rijst et al., 2013). The questionnaire had three sections. The first section of the questionnaire included items which inquired about the individual backgrounds of the teachers (i.e., gender, age, educational background, institutional background, years of research experience, years of teaching experience and time spent doing research).

The core section consisted of seven scales addressing the role of research in teaching (i.e., the goals of integrating research into teaching): teachers' beliefs about the ideal role of research in teaching and teachers' perceptions of the actual role of research in their own teaching. Items for these scales were formulated as statements that had to be rated on a five-point Likert scale ranging from 1= 'almost never' to 5= 'almost always'. Five scales (18 items) were adapted from an existing questionnaire developed by van der Rijst et al. (2009) and van der Rijst et al. (2013). We selected those scales which were relevant for examining the role of research in teaching from the existing questionnaire and reduced the number of items by factor analysis, using the responses of teachers in a prior data set from van der Rijst et al. (2013). The original questionnaire was designed for students, so we also had to rephrase the items for teachers. We then added two more scales, namely Creative disposition and Research skills (six items altogether); this information is frequently mentioned as important in studies of student learning through research (e.g., Healey et al., 2010; Hunter, Laursen & Seymour, 2007). The final seven scales for this section of the questionnaire were thus: 1) developing creative disposition; 2) developing critical disposition; 3) fostering student research interests; 4) enhancing research skills; 5) prompting student reflection on research; 6) familiarizing students with current research; and 7) encouraging student participation in research. The same questions were posed with regard to the teachers' ideal and actual teaching situations (see section 2 in Appendix 1).

The third section was about teachers' beliefs about teaching in general. Questions in this section were adapted from the Approaches to Teaching Inventory (Trigwell & Prosser, 2004). Factor analysis confirmed that these beliefs showed a scale structure similar to Trigwell and Prosser's, with two scales, namely teaching as information transmission/teacher-focused and teaching as conceptual

change/student-focused (see section 3 in Appendix 1). An overview of the scales and their measurement reliabilities can be found in Table 2.2.

Two versions of the questionnaire were made, one for Chinese participants and the other for the Dutch participants. The latter was completely in English, and for the former the introduction text and background questions were in Chinese (to encourage participation of the Chinese teachers), but all the question items in sections two and three were in English, to minimize misunderstanding caused by translation. The questionnaire was available to participants in a paper and pencil format, a web-based, and a digital format which could be send to teachers as email attachment.

Table 2.2
Teachers' beliefs and perceptions: Scales and reliability (Cronbach's alphas)

Scale		α		
		Chinese & Dutch	Chinese	Dutch
The role of research in teaching				
Ideal/Beliefs	Creative disposition	.79	.85	.63
	Critical disposition	.82	.83	.72
	Student research interests	.73	.76	.70
	Research skills	.77	.81	.67
	Current research in the domain	.81	.84	.74
	Reflection on research	.82	.80	.84
	Students as participants	.81	.78	.86
Actual/Perceptions	Creative disposition	.79	.85	.67
	Critical disposition	.83	.83	.76
	Student research interests	.77	.77	.77
	Research skills	.78	.81	.72
	Current research in the domain	.84	.85	.83
	Reflection on research	.85	.85	.83
	Students as participants	.85	.85	.85
Beliefs about teaching in general				
	Information transmission /teacher-focused	.71	.75	.71
	Conceptual change/student-focused	.82	.84	.73

2.4.3 Data collection

The questionnaire was distributed among the Chinese teachers in December 2011 and January 2012, and among the Dutch teachers over the period February-May 2012. The Chinese teachers in our sample came from a metropolitan city of Southwest China. The Chinese questionnaire data were collected at four different meetings. Two of these meetings were held for teachers from the college of foreign languages in a comprehensive research university in this city. The two other get-togethers were meetings for college teachers of English from different universities in this metropolitan city. Teachers were also sent links to the online questionnaire and email attachments. Most Chinese data were collected via the paper and pencil format of the questionnaire. For the Dutch teachers, invitations to fill out the online questionnaire were sent to teachers at different universities and universities of applied sciences. Incentives were used to encourage participation.

2.4.4 Analysis

As a preparation for the data analysis, we first checked the outliers in the data. Two respondents in the Chinese data apparently had filled in scores in a reverse order regarding the ideal and the actual teaching. We therefore have swopped the scores of these two respondents. We checked the assumptions of normality and homogeneity of variance. Assumptions were violated with regard to most scales, in beliefs about the role of research in teaching and beliefs about teaching in general. Therefore we opted for nonparametric tests.

Background variables were checked. In relation to teachers' beliefs hardly any significant differences were found as to gender, age, and years of teaching experience. The variables that showed significant differences were educational background, years of research experience, the type of course taught, and study-abroad experience. For that reason it is these variables that we will discuss in the Results section.

2.5 Results

2.5.1 The role of research in teaching

The median scores, on a five-point scale, of teachers' beliefs regarding the role research should play in their teaching (ideal role) and their perceptions of how to incorporate research into their actual teaching practice (actual role) are reported in Table 2.3.

Table 2.3
The Chinese and the Dutch university teachers' beliefs about and perceptions of the role of research (Mann-Whitney test)

Scale		Chinese		Dutch		*Z*	*r*
		n	*Median*	*n*	*Median*		
Ideal/Beliefs	Creative disposition	127	4.33	119	4.67	-1.52	-.10
	Critical disposition	125	4.00	120	4.50	-4.21***	-.27
	Student research interests	129	4.00	125	4.00	-1.64	-.10
	Research skills	126	4.00	119	4.00	-2.52*	-.16
	Current research in the domain	124	4.00	119	4.00	-2.04*	-.13
	Reflection on research	126	3.75	119	4.00	-3.00**	-.19
	Students as participants	126	3.75	120	3.75	-0.15	-.01
Actual/Perceptions	Creative disposition	112	3.33	115	3.67	-2.91**	-.19
	Critical disposition	111	3.00	115	3.75	-5.29***	-.35
	Student research interests	113	3.00	116	3.33	-2.16*	-.14
	Research skills	112	2.67	113	3.00	-3.55***	-.24
	Current research in the domain	111	2.67	113	3.00	-2.87**	-.19
	Reflection on research	112	2.50	114	2.88	-3.51***	-.23
	Students as participants	110	2.50	106	2.50	-0.38	-.03

* $p < .05$. ** $p < .01$. *** $p < .001$.

Similarities

The Chinese and the Dutch university teachers were found to be similar in several ways. First, both Chinese and Dutch teachers were positive about the role of research in ideal teaching (see the first half of Table 2.3), meaning that they think that in the ideal situation integrating research in teaching can contribute to all seven scales to some extent. Second, teachers were neutral or slightly negative about the actual role of research in their current teaching (see the second half of Table 2.3). This means that teachers did not perceive themselves to have managed to incorporate research into their actual teaching sufficiently. Third, similar rankings of the seven scales can be identified in both the Chinese and the Dutch teachers' beliefs and perceptions regarding the role of research in university teaching, with creative disposition seen as the most important and student participation as the least important.

Moreover, after Wilcoxon signed-rank tests we found a significant gap ($p < .001$) between the ideal role and the actual role of research in teaching in both Chinese teachers' (r ranging from .54 to .59) and Dutch teachers' beliefs versus perceptions (r ranging from .55 to .59), both representing large effect sizes.

Differences

Apart from these similarities, we also found differences in beliefs and perceptions about the role of research between the Chinese and the Dutch teachers. The Dutch teachers scored significantly higher than the Chinese teachers on both the ideal and the actual role of research in teaching. Particularly for the actual role, more significantly higher scores were found in the Dutch teachers than in the Chinese teachers.

2.5.2 Relationship between beliefs about the ideal role of research and beliefs about teaching in general

Beliefs about teaching in general

Table 2.4 shows median scores and Mann-Whitney test results regarding the Chinese and the Dutch university teachers' beliefs about teaching in general. The overall tendency in both groups was that they both believe more in teaching as conceptual change/student-focused, and slightly disagree with teaching as information transmission/teacher-focused. Despite this similar pattern in their beliefs about teaching in general, they differed in the extent of these beliefs. The Dutch teachers had significantly stronger beliefs about teaching in general as conceptual change/student-focused than the Chinese teachers, with medium effect size. Also, the Dutch teachers showed significantly stronger disagreement with teaching as information transmission/teacher-focused.

Table 2.4

The Chinese and the Dutch university teachers' beliefs about teaching in general (Mann-Whitney test)

Scale	Chinese		Dutch		*Z*	*r*
	n	*Median*	*n*	*Median*		
Information transmission/teacher-focused	132	2.94	115	2.75	-2.12*	-.13
Conceptual change/student-focused	132	3.50	115	3.88	-4.04***	-.26

* $p < .05$. ** $p < .01$. *** $p < .001$.

Relationship between beliefs about teaching in general and beliefs about the role of research

We explored the relationship between teachers' beliefs about the role of research in ideal teaching and their beliefs about teaching in general (see Table 2.5). Two

persuasive trends for both Chinese and Dutch teachers were identified. First, beliefs about teaching as conceptual change/student-focused were significantly related to teachers' beliefs about the ideal role of research in teaching. Second, no significant correlations were found between beliefs about teaching as information transmission/teacher-focused, and beliefs about the role of research in ideal teaching with regard to all seven scales. Such trends indicate a systematic positive relationship between beliefs about teaching as conceptual change/student-focused and beliefs about the ideal role of research in teaching.

Table 2.5
Correlation between Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching and their beliefs about teaching in general (Spearman's rho correlation coefficient)

Scale	Information transmission/ teacher-focused		Conceptual change/ student-focused	
	Chinese	Dutch	Chinese	Dutch
Creative disposition	-.07	-.09	.44**	.23*
Critical disposition	-.13	-.09	.36**	.27**
Student research interests	-.03	-.01	.35**	.02
Research skills	-.07	-.05	.31**	.17
Current research in the domain	-.00	-.16	.33**	.26**
Reflection on research	.01	-.12	.42**	.14
Students as participants	.10	-.02	.35**	.14

**. Correlation is significant at the .01 level (2-tailed).
*. Correlation is significant at the .05 level (2-tailed).

However, the Chinese and the Dutch teachers also differed in the correlations between beliefs about teaching in general and beliefs about the ideal role of research. More significant correlations were found between the Chinese teachers' beliefs about teaching as conceptual change/student-focused and their beliefs about the ideal role of research in teaching than in the data for the Dutch respondents.

2.5.3 The role of research in teaching and teachers' backgrounds

In order to gain a more nuanced picture of the differences in the Chinese and the Dutch teachers' beliefs and perceptions, we further explored to what extent teachers' backgrounds were related to their beliefs and perceptions. Background variables in this section were investigated in two ways. For research experiences and teaching experiences, we treated the Chinese and the Dutch teachers as separate groups. For teachers' educational background, study abroad experience, and the types of course they teach, we compared Chinese and Dutch teachers with

similar backgrounds. This was because we intended to explore the differences and similarities between Chinese and Dutch teachers while controlling for these background variables.

Teaching experience and research experience

As a preparation to discover the relevance of teaching experience and research experience, we used Crosstab analyses to check whether the Chinese and the Dutch teachers differed in the years of research experience and teaching experience. The results showed that they did differ significantly in these background variables: Teaching experience (Cramer's $V = .35$, $df = 3$, $p < .001$), and research experience (Cramer's $V = .34$, $df = 5$, $p < .001$). The Dutch teachers in our sample were more experienced in teaching, but less experienced in research than the Chinese teachers.

Spearman's rho was calculated concerning the correlation between teaching experience, research experiences and teachers' beliefs about and perceptions of the role of research. As to teaching experience, a similar general trend was found between Chinese and Dutch teachers. There were only few significant correlations with teachers' beliefs about and perceptions of the role of research and the years of teaching experience. This indicates that the years of teaching experience do not explain the differences in teachers' ideas about the role of research.

Regarding research experience, Chinese and Dutch teachers were rather different. For Dutch teachers we found research experience to be significantly related to almost all scales of their beliefs about the ideal role and their perceptions of the actual role of research in teaching, but for the Chinese sample research experience relates significantly to only a few scales concerning the actual role. This implies for the Dutch teachers that the more research experience they have, the more highly they value the role of research in teaching and the more they have managed to integrate research into their actual teaching practice. However, for the Chinese teachers more research experience was related to only some aspects of their perceptions of how they integrate research into their actual teaching.

Type of course, educational background, and study-abroad experience

Due to the fact that only few of the Chinese teachers taught courses that were focused on research, we conducted Mann-Whitney tests between the Chinese (n = 124) and the Dutch (n = 73) teachers who taught mainly non-research focused courses. Similarly, due to a dissimilarity of the Chinese and the Dutch teachers regarding their educational backgrounds, we conducted Mann-Whitney tests only between those Chinese (n = 117) and those Dutch (n = 95) teachers with Master's degrees. In both situations, the Dutch teachers scored significantly higher than the Chinese teachers regarding both the ideal and the actual role of research in teaching, particularly so for the actual role of research.

Regarding teachers' study-abroad experiences, more differences were found between the Chinese and the Dutch teachers who had no experience of studying abroad than between those who did spend time abroad.

2.6 Conclusions and discussion

Persuasive trends can be summarized as follows. First, in an ideal teaching situation both the Chinese and the Dutch teachers highly value the idea of integrating research into their teaching for student learning, but reported significantly lower scores on how well they incorporate research into their actual teaching practice. In other words, there is a significant ideal-actual gap between what teachers believe the role of research should be and how well they have achieved those beliefs in their actual teaching.

Second, the Chinese and the Dutch teachers were similar in the way they ranked the importance of the seven aspects of the role of research, both groups viewing developing creative disposition as the most important aspect and student participation as least important.

Third, the Dutch teachers rated the importance of the role of research significantly higher than Chinese teachers in both the ideal and in the actual teaching practice. This tendency was still found when the sample consisted of Chinese and Dutch teachers from a similar educational background, teaching non-research focused courses. Study-abroad experiences reduced the differences between the Chinese and the Dutch teachers.

A fourth finding was that both the Chinese and the Dutch teachers preferred teaching to be conceptual change/student-focused over teaching as information transmission/teacher-focused. However, the Dutch teachers were significantly more inclined to use a conceptual change/student-focused approach and disagreed to a greater extent with teaching as information transmission/teacher-focused.

Furthermore, for both the Chinese and the Dutch teachers we found that the more they view teaching as conceptual change/student-focused, the more highly they value the ideal role of research in teaching, with a stronger tendency found in the Chinese teachers. However, if we assume that including research in teaching contradicts an approach to teaching that focuses on transmitting information, it is interesting to find no significant negative correlations between teaching as information transmission/teacher-focused and the way teachers value the ideal role of research in teaching.

Finally, both the ideal and the actual role of research did not relate to the years of teaching experience, but did relate positively to the years of research experience, particularly for Dutch teachers.

2.6.1 Western influence spreading

Despite the various differences in the education system, education traditions, and teachers' backgrounds, it is surprising to find that the Chinese and the Dutch teachers to be more similar than they are different. One of the similarities, for instance, is that both the Chinese and the Dutch teachers value highly the ideal role of research in teaching. This is in line with previous findings that in an ideal world teachers believe there should be a strong link between research and teaching (e.g., Neumann, 1992). The fact that the Chinese and the Dutch teachers share similar views can be seen as a result of the growing emphasis on research world-wide, because research is often believed to be the core of innovation, and research productivity an important source of national competiveness (cf. Shin, 2012).

Furthermore, modern Chinese education is influenced by Western ideas. A growing consensus between Chinese teachers and teachers from the West may be emerging, subsequent to increased government efforts through the *985* and *211 Projects* toward supporting research activities in an international context and to build world-class universities. Chinese teachers are likely to stay close to the new development and urgent issues regarding research-teaching nexus because of scholars returning from Western countries, as well as professors and academics visiting from the West. This is further confirmed by our findings that Chinese teachers with study-abroad experiences are less different from Western teachers.

Another possible reason is related to the reality that the contemporary scientific culture is primarily Western, and Chinese teachers recognize the necessity to adapt to this reality (cf. Altbach, 1989), at least before they can establish their own. Academic works carrying Western ideas are imported in China, so that even those teachers staying in China are not isolated from the West. Moreover, publications in standard Western journals has been increasingly used as indicators of the quality of research productivity of Chinese university teachers. Thus, these teachers are frequently in contact with new developments in the West.

Given the widespread impression of the Chinese way of teaching as characterized by rote learning and memorization, it is surprising to find that the Chinese teachers in our study also emphasize teaching more as conceptual change/student-focused than information transmission/teacher-focused. This contradicts with some other research findings. For example, Wang (2009, quoted in Wang & Liu, 2011) indicates that the Chinese modes of teaching emphasize imparting knowledge and neglects knowledge generation. However, given the strong influence of the Western education models, high exposure to Western scientific output, and large numbers of Western-educated academics in Chinese universities (e.g., Altbach 1989, 2009), the chances of a clear-cut Chinese way of teaching cannot be expected to be high. English language teachers may have experienced more Western influences because of the language they teach.

2.6.2 Legacy from the Chinese education traditions

Though the general patterns are similar in Chinese and Dutch teachers' beliefs and perceptions, they differ in the extent to which they value the role of research in an ideal situation, and the extent to which they could incorporate research into their actual teaching practice. For example, Chinese teachers are less inclined to include research in their teaching than Dutch teachers. This is related to various differences between the two countries. In this study we have attempted to draw insights from the different educational traditions in the two countries.

First of all, the traditional Chinese educational ideas can partially clash with research-based teaching, and consequently may lead to more difficulties for Chinese teachers in incorporating research into their teaching. Chinese teachers, though influenced by Western educational philosophies, are also under the influence of traditional Chinese education. Confucius emphasizes emulating one's seniors and knowing through reflection (Shim, 2008; Wong, 2011), but put less emphasis on investigating the unknown. In addition, for quite some time in the past, under the Imperial Examination system Chinese education emphasized memorization of the classics (Niu, 2007), which has planted in Chinese education an approach to teaching that focuses on content and the final product. In addition, in the case of language education memorizing grammar and vocabulary used to be common ways of language learning in Western countries as well, and it became particularly popular in Chinese secondary education. However, incorporating research into teaching can imply a focus on exploration and on the process, which is rarely emphasized in the traditional Chinese education.

A second reason is the absence of training in inquiry and investigation in Chinese secondary education. Again, this absence derived from the traditional Imperial Examination system. The high importance of the National College Entrance Exam in current Chinese education has driven secondary education, and sometimes even primary education institutions, to prepare students for various exams, which together accumulate to the National College Entrance Exam (Niu, 2007). Therefore, learning through inquiry and investigation has hardly been part of primary and secondary education. Students have been so accustomed to the test-driven practice in Chinese secondary education that it is more difficult for university teachers to shift away from those practices.

2.6.3 Limitations and implications

The stress placed in our study on a particular cultural factor pertaining to educational traditions can be easily overdone in a complex world (cf. Mason & Evers, 2010), and therefore we must note that there are other potential factors, such as the educational policies, economic situations, the design of the curriculum and the aims and content of the courses, that have not been discussed in this paper but may also explain the differences and similarities between Chinese and Dutch teachers.

It should also be remembered that the implications of our findings are limited to teachers who work at language and culture departments. Also, the limited sample size did not allow us to see in more detail how teachers' backgrounds may have played a role in shaping their ideas and characterizing their practices.

In general, we wanted to emphasize in this study the blurry boundaries between educational ideas across the world, particularly with the spreading of Western educational ideas to the Asian world. Uniformity in educational ideas might aid the process of globalization of higher education, but it is less beneficial to potential constructive ideas from local educational thinking.

For Western university professors, familiarization with the educational preconceptions of their Asian students can reduce the difficulties to understand these students. For Asian students, an acquaintance with Western educational thinking could be helpful if they are to adapt to learning approaches in Western universities. Similarly, understanding the educational ideas and traditions in Asian countries may enable both Western and Asian higher education institutions to make informed decisions when Western educational providers enter Asian, especially Chinese, higher education.

Our findings also suggest where the situation could be improved or how certain conceptions can be misleading. For instance, beliefs about teaching as conceptual change/student-focused are closely related to the way teachers value the role of research in teaching. This means that to strengthen the link between research and teaching we need teaching approaches which put more emphasis on students' cognitive change. However, it was surprising to see no significant correlation between the way teachers value the role of research in teaching and their beliefs about teaching as information transmission/teacher-focused, which is assumed to be on the opposite side of research-based teaching. This finding could mean that incorporating research into teaching may not necessarily clash with teaching approaches that are oriented towards information transmission initiated by the teacher.

Another implication concerns teachers' research experience. Years of research experience matter more for Dutch teachers than for Chinese teachers. For the Chinese situation this implies that strengthening the link between research and teaching requires more than just increasing teachers' years of research experience, for instance by improving the quality of research experiences and allocating more time to research in comparison to teaching.

Chapter 3

Institutional background: A comparison of teachers from research universities and those from universities of applied sciences[3]

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Abstract

We explored how the institutional backgrounds of university teachers influence their beliefs about what the role of research in university teaching should be and their perceptions of how they have managed to incorporate research into their actual teaching. A total of 132 Dutch university teachers from research universities and from universities of applied sciences participated in our survey study. Teachers from both types of institutions highly valued the role of research in teaching. The teachers from the research universities were more positive about the incorporation of research into their teaching than the teachers from the universities of applied sciences. To explain these differences, the institutional backgrounds of the teachers were investigated in terms of their perceived research support and the institutional research culture. In addition, a couple of the individual background variables of the teachers were explored, including their time spent doing research, educational background and research experience. Research support and research culture were found to be particularly and highly relevant for the teachers at the universities of applied sciences. The teachers with higher educational backgrounds and more research experience — at the research universities — were more positive about how they incorporate research into their actual teaching. We conclude that both institutional and individual background variables play a significant role in the incorporation of research into university teaching, particularly in the case of universities of applied sciences.

3.1 Introduction

During the past decades, both research universities (RU) and universities of applied sciences (UAS) — with the latter also known as polytechnics, *Fachhochschulen* or vocational higher education institutions — have seen a growing emphasis on research. While research universities always seek to maintain their academic status, identity and research focus, universities of applied sciences are 'stretching' their mission to incorporate practice-oriented research into their curricula (Brew, 2001; Griffioen & de Jong, 2013; Kyvik & Skodvin, 2003). In addition to this expansion and growing, global competition in the research world in general, universities are increasingly being called to involve undergraduate students in research. This emphasis on student involvement in research can be seen in the US (Boyer Commission, 1998), the UK (Healey & Jenkins, 2009), Australia (Wilson, Howitt, Wilson, & Roberts, 2012) and the Netherlands (van der Rijst et al., 2013). The call for student involvement in research has also challenged university teachers to rethink not only their research and teaching practices but re-evaluate their beliefs about the role of research in teaching.

Although close connections between research and teaching are valued by both teachers and universities, the implications of having to further strengthen these connections for university teaching are far from clear. The attempts of teachers to combine research and teaching are often hindered by barriers which can stem from a number of factors. Differences exist in the organization and management of the teaching and research domains (Brew, 2010; Griffiths, 2004). Differences exist in the beliefs, knowledge and practices of teachers within the domains of teaching and research (Visser-Wijnveen, van Driel, van der Rijst, Visser, & Verloop, 2012). And differences exist within student populations with increased numbers of students and increasingly diverse populations (cf. Scott, 2010). Greater insight into these barriers and just how teachers deal with them is thus needed to promote a stronger link between university research and teaching.

The efforts of university teachers to promote strong links between research and teaching are also influenced by their beliefs about the *ideal* way of doing this and thus their practices of bringing research and teaching more firmly together (cf. Robertson & Bond, 2001; Rowland, 1996). Differences in how universities and, in particular, RU versus UAS organize their research and teaching can also shape teacher beliefs (cf. Lucas, Healey, Jenkins, & Short, 2008; Robertson & Bond, 2001; Rowland, 1996). Moreover, the educational backgrounds and research experiences of individual teachers can also differ greatly and shape their ideas about how research and teaching should relate.

In the present study, we explored the beliefs of university teachers with regard to what they believe the role of research should be in their own teaching (i.e., the ideal role). We then explored teacher perceptions of how they incorporate research into their actual teaching practice (i.e., the actual role). Finally, teacher

perceptions of the research support and research culture within their institutions were explored along with their individual backgrounds in relation to their perceptions of incorporating research into their actual teaching.

3.1.1 The research-teaching nexus

There is a common belief that research and teaching are positively related (e.g., Deem & Lucas, 2007; Neumann, 1992). However, when research and teaching performance are examined empirically, a strong association between research productivity and teaching quality is not found. A meta-analysis by Hattie and Marsh (1996), for instance, showed a near-zero correlation between research productivity and teaching quality. In most of the studies included in their analysis, the quality of research was measured via productivity (i.e., publication counts) and the quality of teaching measured via student evaluations. Whether these are adequate quality measures is open to discussion, however (cf. Robertson & Blackler, 2006).

Other research has examined the beliefs of teachers and students with regard to what the relationship between research and teaching should be. Most of the university teachers in the studies believe that a close relationship should exist between research and teaching (e.g., Neumann, 1992; Robertson & Blackler, 2006). They think that a strong research-teaching nexus can benefit student learning (e.g., Brew, 2003; Clark, 1997; van der Rijst et al., 2013). And students are found to appreciate research-focused teaching and report being stimulated to learn by the enthusiasm of teachers for research (e.g., Healey et al., 2010; Hunter et al., 2007).

The beliefs of both teachers and students about the research-teaching nexus thus appear to contradict the empirical findings regarding the relationship between research and teaching, which is little or zero.

One possible explanation for this discrepancy in the research findings may lie in research and teaching activities being considered as separate activities while the connection between the two may be more apparent when a context is examined in which both research and teaching are clearly present (Wilson, Howitt, Wilson, & Roberts, 2012).

Another possible explanation for the detected discrepancy in the research findings may lie in the complexity and variability of the research-teaching nexus when situated in different disciplinary domains. The beliefs of teachers, their curricular concerns and their instructional practices are all known to relate to their disciplinary backgrounds (cf. Stodolsky & Grossman, 1995). This means that teachers from the sciences, for instance, typically see the relationship between research and teaching very differently than teachers from the humanities and that these differences may influence their beliefs about how research and teaching should be linked as well (e.g., Visser-Wijnveen, van der Rijst & van Driel, 2012). In the present study, we therefore examined a single disciplinary domain, namely,

the language and culture departments of universities. Almost no empirical literature was available on the research-teaching nexus for this domain, except for a few related studies on how language teachers understand research and teaching in general (e.g., Borg, 2009; Lucas et al., 2008).

A third possible explanation for the observed discrepancy may be the influence of specific conditions on teacher beliefs and their actions. That is, specific contexts may influence teacher beliefs which then, in turn, teacher actions. Teacher beliefs have been argued to mediate their knowledge acquisition, task definitions and actual actions (Pajares, 1992). Different beliefs about the relationship between research and teaching may thus produce different actions for the incorporation of research into teaching.

In the present study, we therefore decided to focus on teachers' beliefs about the role of research in teaching as a first step towards clarifying the discrepancy in the research findings concerned with the research-teaching nexus. In doing this, however, we will also explore the variation in teachers' beliefs about the research-teaching nexus in relation to institutional context and the individual backgrounds of the teachers.

3.1.2 The relevance of institutional background

According to Smylie (1995), organizational conditions are assumed to be closely related to individual learning, thinking and behaviour. Marsh and Hattie (2002) and others similarly argue that the institutional context most likely mediates the relationship between research and teaching (e.g., Feldman, 1987; Griffiths, 2004; Robertson & Bond, 2001). Two sets of conditions appear to be of particular relevance for understanding the influence of institutional background on teachers' beliefs and their teaching practices: the structural and cultural conditions (Little, 2012; Smylie, 1995). Structural conditions refer to the time, resources, workload, evaluation and feedback procedures and policies which are structurally organized in an institution (Imants & van Veen, 2010). Cultural conditions refer to a shared school vision, culture of collaboration, professional learning climate, professional capacity and collective decision making (cf. Little, 2012).

In many universities, research and teaching are driven apart by distinct funding mechanisms and distinct organizational structures (Brew, 2010). Robertson and Bond (2001) also assert that legislative requirements, institutional change and political uncertainty can influence teachers' beliefs and their practices about the relationship between research and teaching. Lucas et al. (2008) argue that institutional culture in the form of academic affiliation, for example, may actually be the key to understanding university teachers' experiences with and perceptions of the relationship between research and teaching. However, none of these studies explain how exactly the institutional conditions influence teacher beliefs about the role of research in their teaching and the way they actually integrate research into their current teaching practice.

In order to investigate the influence of institutional context on teachers' beliefs about the relationship between research and teaching, we compared research universities (RU) to universities of applied sciences (UAS). The two types of institutions are organized differently in terms of content, resources, workloads, evaluation of functioning and policies for both teaching and research. RU tend to be more science- and academically oriented while UAS tend to be more practice- and vocation oriented (Harwood, 2010). Most UAS are primarily teaching institutions (Huisman, 2008), although research activities are becoming more and more a core aspect of faculty tasks, in addition to teaching, due to an ongoing shift in the mission of universities today (Kyvik & Skodvin, 2003). Students are increasingly being given assignments which involve research activities (Healey & Jenkins, 2009). As a consequence, UAS must tackle policy issues concerned with research facilities, distribution of resources, educational aims and recruitment of staff (Kyvik & Skodvin, 2003).

RU and UAS also differ with respect to implicit aspects of the institutional context like research culture, research aims and the perceived value of research. The research culture in UAS is currently less developed than in RU (Huisman, 2008). UAS are nevertheless in a state of transition and their shared research aim is to advance professional practice by expanding the skills of professionals and involving them in practice-oriented research (Griffioen & de Jong, 2013). Research universities have high standards for their teaching, but their research is mostly aimed at developing new knowledge. Particularly in the Dutch binary higher education system, RU and UAS differ from each other in a systematic way, particularly with regard to the aims, content and status of research within the institutions (cf. de Weert, 2006). So we assumed that the institutions differ sufficiently from each other to help us explore how their structural and cultural characteristics affect the beliefs of teachers about the role of research in their teaching.

3.2 Research questions

- What do teachers at research universities and universities of applied sciences believe about the ideal role of research in university teaching?
- How do teachers at research universities and universities of applied sciences perceive the actual role of research in their teaching practice?
- How do the perceptions of university teachers regarding the actual role of research in teaching relate to their institutional and individual backgrounds?

3.3 Method

3.3.1 Procedure and questionnaire

In this chapter we reported on a sub-set of the survey data (n = 132). This part of the data were collected via distribution of an online questionnaire to Dutch university teachers between February 2012 and May 2012. Invitations for online completion of the questionnaire were sent to teachers with book vouchers offered as an incentive for completion of the questionnaire.

For the development of two scales pertaining to perceived support for research and to research culture within the institution for institutional background, we drew upon studies by Borg (2009) and Lucas et al. (2008). Regarding research support, we asked the teachers about institutional support for their research in terms of research training provided and access to research resources. Regarding research culture, we asked the teachers about perceptions of the general importance of research among their colleagues at the institution. We focused on perceptions rather than specific elements of research support and research culture because we assumed that it is the perception instead of the actual research support and culture that may influence teachers to incorporate research in teaching (see section 1 in Appendix 1).

The other parts of the questionnaire were already described in detail in Chapter 2. To avoid repetition, we omitted the description of the development process and included here only the content of the questionnaire. The core section consisted of seven scales addressing the role of research in teaching: teachers' beliefs about the ideal role of research in teaching and teachers' perceptions of the actual role of research in their own teaching. The seven scales for this section of the questionnaire were: 1) developing creative disposition; 2) developing critical disposition; 3) fostering student research interests; 4) enhancing research skills; 5) prompting student reflection on research; 6) familiarizing students with current research; and 7) encouraging student participation in research. The same questions were posed with regard to the teachers' ideal and actual teaching situations (see section 2 in Appendix 1).

The questionnaire included also items which inquired about the individual backgrounds of the teachers (i.e., gender, age, educational background, type of institutions teachers work for, years of research experience, years of teaching experience and time spent doing research). An overview of the scales and their measurement reliabilities can be found in Table 3.1.

The questionnaire was pilot tested with a group of university teachers in November 2011. Senior researchers and thus academics with extensive research experience were asked to give us feedback on the clarity of the questionnaire items and those concerned with institutional support and culture in particular. They were also asked about any other scales which they might like to see included in the questionnaire.

Table 3.1
Measurement scales and their reliabilities (Cronbach's alphas) for beliefs and perceptions regarding the role of research in teaching

Scale	α	Sample item
Role of research in teaching		
Ideal/Beliefs		***Ideally*** in my teaching I would…
Creative disposition	.63	• foster students' sense of innovation.
Critical disposition	.72	• stimulate students not to be easily satisfied with an explanation.
Student research interests	.70	• encourage students' interest in research.
Research skills	.67	• increase students' ability to conduct research.
Reflection on research	.84	• stimulate students to learn about research findings.
Current research in the domain	.74	• make links to the current research practices.
Students as participants	.86	• ask students to make a contribution to research.
Actual/Perceptions		In my ***actual*** teaching practice, I…
Creative disposition	.67	• foster students' sense of innovation.
Critical disposition	.76	• stimulate students not to be easily satisfied with an explanation.
Student research interests	.77	• encourage students' interest in research.
Research skills	.72	• increase students' ability to conduct research.
Reflection on research	.83	• stimulate students to learn about research findings.
Current research in the domain	.83	• make links to the current research practices.
Students as participants	.85	• ask students to make a contribution to research.
Institutional background		
Research support	.80	We are given support to improve our research competencies (through workshops, seminars etc.)
Research culture	.81	The general opinion is that research can enhance the credibility of an institution.

3.3.2 Participants

Teachers who work in the language and culture departments of Dutch universities were surveyed. We compared research universities (RU) and universities of applied sciences (UAS). Dutch universities were particularly attractive for the conduct of our survey because the clear binary higher education system in the Netherlands separates RU from UAS specifically in terms of the aims, content and status of research within the institution (cf. de Weert, 2006). Given that discipline may strongly influence teacher beliefs and their perceptions of the role of research in

teaching (cf. Stodolsky & Grossman, 1995; Visser-Wijnveen, van der Rijst & van Driel, 2012), we focused in this initial survey of teachers on only the language and culture departments of the universities. This was done to minimize the possible effects of variations in academic discipline.

Altogether 60 teachers from six research universities and 253 teachers from nine universities of applied sciences were invited to participate in this survey study. The universities were located in different cities across the Netherlands. In the end, 132 valid responses were obtained: 41 from the RU (response rate 68%), and 91 from the UAS (response rate 36%). With regard to gender, 31% of the respondents were male and 69% female. Age was distributed as follows: 7.6% 30 years or less; 11.5% between 31 and 35 years; 23.7% between 36 and 45 years; 33.6% between 46 and 55 years; and 23.7% 56 years or older. The teachers from RU and UAS had equal amounts of teaching experience. For both types of universities, about two thirds of the respondents had more than 15 years of teaching experience.

The RU respondents had a higher educational background level, had more experience with the conduct of research and also spent more time doing research than the UAS respondents. An overview of these background characteristics of the teachers is presented in Table 3.2.

Table 3.2
Overview of teacher background information

		Research universities (n = 41) %	Universities of applied sciences (n = 91) %
Educational background			
	BA	0	4.8
	MA	53.7	86.9
	PhD	46.3	8.3
Research experience (years)			
	Less than 3	34.1	67.8
	Between 3-15	36.6	28.9
	More than 15	29.3	3.3
Time spent doing research (percentage of total work time)			
	10% or less	50.0	72.5
	15% or more	50.0	27.5

3.3.3 Data analysis

We used nonparametric tests in the analysis of our data because the assumptions of normality and homogeneity of variance were not met by most of the scales in our questionnaire. In order to determine the similarities and differences in the ideal and actual role of research and thereby answer both our first and second research questions, we applied Wilcoxon signed-rank tests and Mann-Whitney tests. In

order to determine how the perceptions of university teachers with regard to incorporating research in their actual teaching relate to their institutional backgrounds and thus answer part of our third research question, Spearman's correlation coefficients were applied. Finally, to determine how the perceptions of the university teachers with regard to incorporating research in their actual teaching relate to their individual backgrounds and thus answer the other part of our third research question, we applied both Mann-Whitney tests and Kruskal-Wallis tests.

3.4 Results

3.4.1 The role of research in teaching

In order to answer our first and second research question, we examined the similarities and differences in the beliefs of the teachers from the RU and UAS with regard to the role which research should play in teaching (ideal role) and their perceptions of how well they have managed to incorporate research into their own teaching practice (actual role).

Similarities between the RU and the UAS teachers

The beliefs of the RU teachers and the UAS teachers in our study were very positive and rather similar with regard to the ideal role of research in university teaching (see the upper half of Table 3.3). The only exception was a scale concerned with the role of research in fostering student interests to do research themselves (the third scale).

A major gap between the beliefs (i.e., ideals) and the perceptions (i.e., actuals) of both the teachers from the RU and the UAS was found. For all scales, very large effects were found, moreover (*r* above .50 for all seven scales; results not reported in table).

There was also a marked agreement among the teachers on how they ranked different aspects of the role of research in teaching (see Table 3.3). In both the ideal and actual teaching situations, developing a creative and critical stance on the part of students ranked highest while encouraging students to participate in research ranked lowest.

Differences between the RU and the UAS teachers

Significant differences were found in the perceptions of the actual role of research in their teaching (see bottom half of Table 3.3). The RU teachers scored significantly higher concerning the role of research in their actual teaching than the UAS teachers, especially regarding critical disposition, student research interests, research skills, reflection on research and current research in the domain (medium effect sizes, *r* ranging from -.25 to -.35).

Table 3.3
The role of research in teaching: Comparison of beliefs about and perceptions of the RU teachers and the UAS teachers (Mann-Whitney test)

Scale		RU		UAS		*Z*	*r*
		n	*Median*	*n*	*Median*		
Ideal/Beliefs	Creative disposition	36	4.67	83	4.33	-0.47	-.04
	Critical disposition	37	4.50	83	4.50	-1.42	-.13
	Student research interests	39	4.33	86	4.00	-1.97*	-.18
	Research skills	36	4.33	83	4.00	-1.74	-.16
	Reflection on research	36	4.00	83	4.00	-1.76	-.16
	Current research in the domain	36	4.00	83	4.00	-1.04	-.09
	Students as participants	38	3.75	82	3.75	-1.21	-.11
Actual/Perceptions	Creative disposition	34	3.83	81	3.67	-1.10	-.10
	Critical disposition	34	3.88	81	3.50	-3.11**	-.29
	Student research interests	36	3.67	80	3.00	-2.82**	-.26
	Research skills	35	3.33	78	3.00	-2.64**	-.25
	Reflection on research	35	3.50	79	2.75	-3.22**	-.30
	Current research in the domain	35	3.33	78	2.83	-3.69***	-.35
	Students as participants	34	2.50	72	2.38	-1.62	-.16

* $p < .05$. ** $p < .01$. *** $p < .001$.

Inspection of the size of the gaps between the median scores of the teachers for the ideal versus the actual also indicated marked differences between the RU and UAS teachers. We therefore further explored these differences using Mann-Whitney tests (see Table 3.4). Significant differences in the ideal-actual gap for the RU teachers versus the UAS teachers were apparent for the following scales: critical disposition, student research interests, research skills, reflection on research and current research in the domain. For these five scales, the UAS teachers showed a significantly greater gap between their beliefs (i.e., ideals) and perceptions (i.e., actuals) than the RU teachers. Particularly striking in this regard was the gap for the scale "current research in the domain" (r = -.33).

Table 3.4
Differences in the size of the gap between ideal and actual experiences of RU versus UAS teachers with incorporating research into teaching (Mann-Whitney test)

Scale	RU		UAS		*Z*	*r*
	n	*Median*	*n*	*Median*		
Creative disposition	34	.33	81	.67	-1.70	-.16
Critical disposition	34	.50	81	1.00	-2.69**	-.25
Student research interests	36	.67	80	1.00	-2.43*	-.23
Research skills	35	.67	78	1.00	-1.96*	-.18
Reflection on research	35	.75	79	1.00	-2.60**	-.24
Current research in the domain	35	.67	78	1.33	-3.53***	-.33
Students as participants	34	.88	72	1.00	-0.88	-.09

* $p < .05$. ** $p < .01$. *** $p < .001$.

3.4.2 Individual backgrounds

To gain more insight into the observed differences in the teachers' perceptions of the actual role of research in their own teaching, the educational backgrounds, research experience and time spent doing research were analysed together with the perceptions of the RU versus UAS teachers (see Table 3.5).

Table 3.5
Individual backgrounds of teachers in relation to perceptions of the role of research in their actual teaching (Mann-Whitney test and Kruskal-Wallis test)

Scale	RU			UAS		
	EB	RE	TR	EB	RE	TR
Creative disposition	ns	ns	ns	ns	ns	ns
Critical disposition	ns	+	ns	ns	++	ns
Student research interests	++	+	+	ns	+	ns
Research skills	+	+	++	ns	++	ns
Reflection on research	+	++	+	+	+++	ns
Current research in the domain	ns	ns	ns	ns	++	ns
Students as participants	ns	ns	++	ns	+++	ns

Note. EB = educational background (Mean ranks: Master's, PhD); RE = years of research experience (Mean ranks: less than 15 years, more than 15 for RU teachers; less than 3 years, more than 3 years for UAS teachers); TR = time spent doing research (Mean ranks: 10% or less, 15% or more).
ns $p > .05$. + $p < .05$. ++ $p < .01$. +++ $p < .001$.

Mann-Whitney tests were carried out for educational background and time spent doing research; the Kruskal-Wallis test was carried out for research experience. On the whole, we found higher educational background, more research experience and more time spent doing research to be associated with more positive perceptions of the role of research in teaching practice. The teachers with a PhD (i.e., higher educational background) generally perceived themselves as having better integrated research into their teaching than the teachers with a Master's degree. Those RU teachers with more than fifteen years of research experience were significantly more positive about the actual role of research in their teaching than those with less research experience. Somewhat comparable, those UAS teachers with more than three years of research experience were significantly more positive about the actual role of research in their teaching than those with less than three years of research experience. Regarding the time spent doing research by the teachers, significant differences were found between those RU teachers who spent 10% or less of their working time on research and those who spent 15% or more. No significant differences among the UAS teachers were found for time spent doing research in relation to their perceptions of the role of research in their actual teaching.

3.4.3 Institutional background

We next investigated the potential associations between teachers' perceptions of research support and the institutional research culture in relation to their perceptions of the actual role of research in their teaching.

As Table 3.6 shows, the teachers at both types of universities *positively* viewed the research support and research cultures within their institutions. They both valued the institutional research culture *more* than institutional research support. And they had similar perceptions of the institutional research support.

Table 3.6
Perceptions of research support and research culture by university teachers (Mann-Whitney test)

Scale	RU		UAS		*Z*	*r*
	n	*Median*	*n*	*Median*		
Research support	40	3.25	91	3.50	-1.36	-.12
Research culture	39	4.20	91	3.80	-4.11***	-.36

*** $p < .001$.

Despite these general similarities, the RU teachers perceived significantly stronger research cultures in their institutions than the UAS teachers (medium effect size: $r = -.36$).

To further explore how teacher perceptions of the research support and research culture relate to their perceptions of the actual role of research in their own teaching, correlations were calculated for each of the scales (see Table 3.7).

Table 3.7
Teacher perceptions of institutional research support and institutional research culture in relation to their perceptions of the actual role of research in their teaching practice (Spearman's rho correlation coefficients)

Scale	Research support		Research culture	
	RU	UAS	RU	UAS
Creative disposition	.12	.28**	-.09	.32**
Critical disposition	.15	.22*	.16	.30**
Student research interests	.00	.20*	.11	.27**
Research skills	.17	.22*	.21	.09
Reflection on research	.25	.34**	.26	.30**
Current research in the domain	.22	.41**	.42**	.22*
Students as participants	.23	.26*	.10	.12

**. Correlation is significant at the .01 level (1-tailed).
*. Correlation is significant at the .05 level (1-tailed).

For the UAS teachers, perceptions of institutional research support correlated significantly with all of the "actual role of research in teaching" scales. The r_s ranged from .20 to .41, which indicate small to medium effects. Their perceptions of the institutional research culture also correlated significantly with most aspects of their perceptions of the actual role of research in their own teaching. The r_s ranged from .22 to .32, indicating small to medium effects. Two scales were an exception (research skills, students as participants).

For the RU teachers, only their perceptions of the institutional research culture correlated significantly — and strongly —with their perceptions of the role of research in their own teaching but only for the scale familiarize students with current research in the domain (r_s = .42).

3.5 Conclusions and discussion

With regard to our first two research questions, namely university teachers' beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their own teaching, we found the RU teachers (the teachers at research universities) and the UAS teachers (the teachers at universities of applied sciences) to resemble each other in four aspects. First, both groups were of the same opinion that ideally research should be integrated into university teaching as

was specified in the seven scales. Second, they both show a significant gap between what they believe about the ideal role of research in teaching and their perceptions of the actual role of research in their own teaching. Third, both the RU teachers and the UAS teachers consider the development of a creative disposition and a critical disposition to be the most important aspects of both their beliefs about and perceptions of the role of research in teaching. Fourth, they both consider student participation in research to be the least important aspect of the role of research in teaching. Also this appeared from both their beliefs and perceptions.

Despite these major similarities, the RU teachers reported a significantly more important role of research in their actual teaching than the UAS teachers. The gap between the teachers' beliefs about the ideal role of research in teaching and the teachers' perceptions of the role of research in their actual teaching was significantly greater, moreover, for the UAS teachers than for those RU teachers.

To explain the two aforementioned differences, we investigated the teachers' individual and institutional backgrounds. We found that a higher educational background, more research experience, and more time spent doing research were associated with a more positive perception of how teachers incorporate research into their actual teaching. These were all characteristics of the RU teachers. Although the teachers from the two groups of universities showed similar perceptions of institutional research support, the RU teachers perceived a stronger research culture. Together with the finding that the RU teachers had stronger positive perceptions of integrating research into their actual teaching than the UAS teachers, institutional background appears to be critical. This conclusion is further confirmed by the finding that both research support and research culture were associated with the UAS teachers' perceptions of how well they could integrate research into their own teaching.

3.5.1 The ideal and actual role of research in teaching

Our most striking finding is that both the RU teachers and the UAS teachers were similarly positive about the ideal role of research in teaching. This similarity has been rarely noted or discussed in the relevant research literature. While university teachers, in general, have been noted to believe in a close connection between research and teaching (Neumann, 1992; Robertson & Bond, 2001), most of the studies to date have not distinguished between RU and UAS teachers. Our study showed the UAS teachers to consider, in an ideal situation, the role of research in teaching to be just as important as the RU teachers.

The finding of shared beliefs about the importance of research in teaching across universities may stem from the increased attention being paid to this and increased endeavours to do this at UAS in recent years. As a result of the ongoing academic drift and mission stretch, teachers and students at UAS are increasingly being expected to be involved in research endeavours and assignments (Brew, 2001; Griffioen & de Jong, 2013; Kyvik & Skodvin, 2003). Research skill and

experience have, moreover, begun to weigh more heavily in the selection procedures for teaching staff at UAS (de Jong & de Jager, 2007). The results of our survey study indicated that such efforts have also affected teachers' beliefs about the role which research should play in their own teaching.

Such a growing emphasis on research in UAS is also reflected in our finding regarding the way teachers perceived the research support within their own institutions. It might be surprising that the RU teachers and the UAS teachers perceived research support in a similar way, because it is to be expected that research support is higher in research universities than in professional ones. It should be noted that we measured the way teachers perceive research support rather than the actual support provided. In other words, the RU teachers were likely to view research support less positively, since they were more accustomed to the level of research support provided in their institutions, and the UAS teachers were likely to have more positive perceptions because in their institutions research support was something newly introduced.

Another similarity between the RU and UAS teachers was that they both observed a significant gap between their beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their own teaching. This gap resembles the discrepancy observed for expectations of a close association between research and teaching (e.g., Robertson & Bond, 2001), on the one hand, and little or near zero correlation between research productivity and teaching quality (e.g., Hattie & Marsh, 1996) on the other hand. In future investigations, into the relationship between research and teaching, explicitly addressing the differences between beliefs in the ideal situation and perceptions regarding actual practice could contribute to a better understanding of the ambiguous relationship between research and teaching.

3.5.2 Relations of teacher perceptions of the actual role of research in their current teaching to institutional background

The RU and UAS teachers differed in their perceptions of how they have managed to integrate research into their current teaching practices (i.e., perceptions of the actual role). To understand these differences, we can draw upon explanations offered in the organizational research literature and namely the assumption that beliefs are usually embedded in specific contexts (cf. Feldman, 1987; Smylie, 1995). In our case, the specific contexts refer to the individual backgrounds of the teachers and institutional settings (RU versus UAS, research support and research culture). The RU teachers had more research training and more research experience than the UAS teachers in our study. On the basis of this information alone, the RU teachers could be expected to have fewer difficulties incorporating research into their teaching than the UAS teachers, which was found to be the case in our study.

The historical backgrounds of the institutions and the fact that research universities have been engaged in research for a much longer period of time than

universities of applied sciences can also be expected to make it easier for teachers at the former to incorporate research into their teaching than teachers at the latter. As a result of academic drift and mission stretch, UAS have only recently become involved in research (Kyvik & Skodvin, 2003).

Perhaps closely related to these background differences, the two types of universities in the Netherlands differ with regard to educational aims, the amount of time allocated to research versus teaching, the research culture which has been developed, and the research support provided by the institutions. These differences can help us understand the more positive perceptions of the actual role of research in teaching for the RU teachers relative to the UAS teachers.

First, UAS used to be teaching-only institutions and therefore more profession/vocation-oriented than research universities; the educational programs were mostly aimed at training for professional practice (cf. Griffioen & de Jong, 2013). In contrast, research universities have been research-oriented all along and their educational programs may or may not directly relate to professional practice in particular.

Second, the RU teachers in our study reported more structural work time for research activities than the UAS teachers, as indicated in Table 3.2. Time constraints may thus make it difficult for UAS teachers to combine research and teaching.

Third, research universities have well-developed research support and thus a strong research culture, which is also indicated by our survey results. The RU teachers perceived their institutions to indeed have stronger research cultures than the UAS teachers. Our assumption that institutional support and the institutional research culture play a role in the extent to which university teachers have managed to integrate research into their actual teaching is particularly confirmed by the perceptions of the teachers at the changing UAS: Their perceptions of the research support and research cultures at their institutions significantly correlated with their perceptions of how well they have actually integrated research into their teaching practice.

In general, our findings indicate that both individual and institutional conditions — including educational background, research experience, time spent doing research, institutional research culture and institutional research support — are relevant for a teacher's efforts to integrate research into teaching. Stated differently, both individual and institutional conditions help explain the gap between what teachers believe about the ideal role of research in teaching and what they perceive about the actual role of research in their teaching.

Chapter 4

Fitting the Western idea for Chinese higher education?[4]

[4] This chapter has been submitted for publication in an adapted form as:
Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (under review). The role of research in teaching: A case study of Chinese university teachers.

Abstract

We explored the beliefs of Chinese university teachers with regard to what the role of research in university teaching should be and their perceptions of how research is actually integrated into their current teaching practices. We also explored which factors relate to the teachers' perceptions of their integration of research into their teaching today. This chapter focuses on the Chinese subsample from the survey study to explore how the Western idea about integrating research into teaching for the benefit of student learning is adopted and adapted within a Chinese context. China differs from Western countries in terms of the educational traditions, the current higher education system and curricular designs, and the social-economic circumstances. Because of these differences, the Chinese context of higher education can expect to be incompatible with the idea to integrate research into teaching and therefore create tensions for adapting this Western idea into Chinese higher education. We surveyed 152 university teachers who teach English as a foreign language. The teachers were found to be very positive about the role research should play in teaching in an ideal situation, but nevertheless had low perceptions of their actual integration of research into their current teaching practice. To understand this gap, we analysed a number of individual background characteristics of teachers (i.e., research experience, time spent doing research, learner type, study abroad) in relation to their perceptions of how they have actually integrated research into their current teaching practices. We also took into account the institutional background (research intensive versus non-research intensive institutions). The teachers with more years of research experience, spent more time doing research and from research intensive universities were found to have more positive perceptions of their actual integration of research into their current teaching. In addition, the teachers themselves mentioned fixed curricula and a lack of time and student motivation as reasons for the observed gap. The biggest constraint, however, appeared to be the mismatch between the current aim of maximizing language proficiency in China and the need to prepare students for functioning in a world that requires ongoing learning and research competence.

4.1 Introduction

A strong relationship between research and teaching is often considered one of the defining features of the academic identity of a university (e.g., Robertson & Bond, 2005). However, there is little empirical evidence demonstrating a positive connection between research and teaching or showing how to bring research and teaching together (cf. Brew, 2003).

One way of bringing research and teaching together is to embed research in teaching, as many university programs are aiming to do today by engaging undergraduate students in research activities (e.g., Boyer Commission, 1998 in the US; Healey et al., 2010 in the UK; Wilson, Howitt, Roberts, Åkerlind, & Wilson, 2012 in Australia; van der Rijst & Visser-Wijnveen, 2011 in the Netherlands). It can be assumed that the idea of undergraduate engagement in research will also spread to Asian countries, including China, because Western educational ideas often travel quickly between nations in the form of educational reforms, research cooperation, and student exchanges (Dang, 2013). Chinese university teachers will face the same question about how to embed research in teaching and therefore have to re-think the role of research in their ongoing teaching.

Just how Chinese university teachers will adopt and adapt the idea of embedding research in teaching is unknown. This is because the goal of education is defined differently within the Chinese education system than within most Western education systems. The main goal of Chinese higher education is to foster Chinese economic development — a goal that is closely related to Chinese government policy (Hayhoe & Zha, 2006). In the case of teaching English as a foreign language (EFL), for example, the goal is to mainly develop the English language abilities of students and thereby provide a workforce capable of internationalizing the Chinese economy. An important goal of most Western education systems, in contrast, is to involve students in research and thereby prepare them to function in a complex and constantly changing world (Brew, 2010).

Chinese university teachers also face barriers which stem from a number of factors. First, the current Chinese education system lacks systematic research support (cf. Bai, Millwater, & Hudson, 2013). This situation obviously impedes the research endeavours of teachers and any attempts to bring research and teaching closer together. Second, Chinese university teachers also face the issue of separate funding and assessment for their research versus teaching activities. This is almost a widespread problem and one that persists in such Western countries as the UK and Australia (Brew, 2003). Moreover, language teaching is traditionally teaching-dominated (cf. Bai, Millwater, & Hudson, 2012). This means that the pedagogical and professional benefits of research are unclear for most language teachers in China (cf. Zhou, 2005). The desired incorporation of research into teaching is a complex problem to be solved, and particularly in the case of EFL teachers at Chinese universities.

In order to gain greater insight into the beliefs of teachers about the role of research should play in teaching today and their perceptions of how they have actually managed to integrate research into their current teaching, we surveyed EFL teachers from Chinese universities with regard to not only these issues but also how they relate to teacher background variables. In the following, however, we will first consider the relationship between research and teaching — that is, the research-teaching nexus — as described in the current research literature. We will then describe the policy context for research and language instruction in China.

4.1.1 The research-teaching nexus

The relationship between research and teaching has been explored mainly in two different ways. On the one hand, research on the beliefs of both teachers and students indicates that a positive connection between research and teaching should ideally exist (e.g., Deem & Lucas, 2007; Neumann, 1992; Robertson & Blackler, 2006). On the other hand, research on the empirical relationship between research productivity and teaching effectiveness has shown an almost zero correlation between the two (e.g., Hattie & Marsh, 1996). This zero correlation suggests that the links between high research productivity and good teaching may need to be strengthened (Marsh & Hattie, 2002).

One explanation for the apparent contradictory findings reported in the literature obviously lies in a missing link between the two streams of investigation. One stream explored teachers' beliefs about the connections between research and teaching in an ideal world, the other focused on the correlations between actual research and teaching performances. Little is known about how things look like when both beliefs and performance are investigated. Another possible explanation for the discrepancy may lie in the examination of the research and teaching activities as separate activities while the connection between the two may be more apparent in a context where both are clearly present — for example in a context where research is integrated into actual teaching practice (cf. Clark,1997; Wilson, Howitt, Wilson, & Roberts, 2012). A new way to investigate the research-teaching nexus is thus called for.

4.1.2 Policies promoting research excellence in China

As the promotion of research excellence is growing in higher education in the West, the promotion of research excellence is reaching the core of higher education in Asian countries as well (cf. Tien, 2007). This is because knowledge in a knowledge-based economy provides a competitive advantage for the economic development of a country (Shin, 2012) and research productivity was thus emphasized in order to stimulate knowledge production and knowledge-based innovation.

Government policies promoting research excellence have meant increased funding for research in China (Wang & Liu, 2011) and increased efforts to build

world-class universities via two national projects in particular, namely the *211 Project* and the *985 Project* (e.g., Altbach, 2009; Hayhoe & Zha, 2006; cf. footnote in section 1.2.4).

Excellent research performance is increasingly being required for the recruitment of new staff members in Chinese higher education. The promotion and annual assessment of the overall performance of university teachers in China is also being increasingly closely related to their research performance (cf. Bai et al., 2012). And for Chinese academics, regardless of academic discipline, research excellence is often being taken as an indicator of competence and academic identity today (cf. Bai et al., 2013).

4.1.3 Economic development and the aim of language education

Language education in China today is mainly focused on increasing the language abilities of students to stimulate economic development and not so much preparing them for a complex, ever changing world that thus requires ongoing learning and research competence. China has a historical tradition of "education for governance," as represented by the Imperial Exam system, which has traditionally been used to select and appoint high rank officials in the country (Niu, 2007). Presumably influenced by this tradition, current Chinese governmental policies also use higher education as an instrument to stimulate economic development (Hayhoe & Zha, 2006). The expansion of university enrolments since 1998 is one such effort to accumulate human capital and thereby stimulate economic development (cf. Wang & Liu, 2011). In the case of EFL teaching, the main aim is to foster English language proficiency and thereby promote the internationalization of the Chinese economy. Existing EFL curricula are designed to maximize language abilities and thus involve little or no research materials or research activities.

In keeping with China's educational tradition, higher education students themselves also tend to perceive language education — including EFL education — as a means to climb the career ladder. Speaking English in China is indeed likely to "open doors to academic, professional and business success" (Jin & Cortazzi, 2002, p. 53). In the Chinese education system, moreover, English serves a gatekeeping function — via, for example, the National College Entrance Examination — for access to higher education (Jin & Cortazzi, 2002).

4.1.4 The present study and research questions

Higher education teachers in China face major social and economic barriers to incorporating research into teaching. On the one hand, the goal of most English language teaching is to maximize student language abilities and thereby insure employability but also help stimulate the economic development of China. On the other hand, the overall performance of higher education teachers is assessed in close relation to their research performance as opposed to how they have incorporated research into their actual teaching practices. Against this background,

we therefore decided to survey EFL teachers from Chinese universities. We asked the following questions.

- How do teachers' beliefs about the ideal role of research in teaching relate to their perceptions of the actual role of research in their teaching practice?
- How do teacher background variables relate to their perceptions of the actual role of research in their teaching practice?

4.2 Method

4.2.1 Procedure and participants

In this chapter we reported on a sub-set of the survey data (n = 152). This part of the data was collected between December 2011 and January 2012 through distribution of a questionnaire to university teachers who teach English as a foreign language in a metropolitan area of Southwest China. The questionnaire was distributed at four meetings. Two of the meetings were the routine meetings for teachers from the College of Foreign Languages within a comprehensive research university in this area. A third meeting was the annual meeting held for the teachers of *College English* from some 40 universities in this metropolitan area. And a similar group of teachers attended the fourth meeting, held for the purpose of grading college English Tests. In order to maximize response rates, the teachers were also sent links to an online version of the questionnaire. The majority of the Chinese data, however, was supplied using the paper and pencil format of the questionnaire.

Our sample included university teachers who were strongly involved in research but also teachers with a strong focus on teaching and thus less involvement in research at the moment. The inclusion of teachers with a strong focus on teaching was done to gain an overview of the beliefs of all higher education EFL teachers about the role of research in teaching and not just the views of teachers already strongly involved in research. Given that the relevance of research for teaching is increasingly being recognized across the world, those teachers who are not currently involved in research will also be confronted with the need to incorporate research into their teaching in the not too distant future.

A total of 152 valid responses were received (response rate of 39%). Of the teachers who responded, 54 were from universities being supported by the *985 Project*, which we will therefore refer to as research intensive universities; 37 were from other Chinese universities, which we will refer to as non-research intensive universities; for the remaining 61 teachers, information was not available about the type of university they worked for. There were roughly twice as many female teachers as male teachers. The majority of the teachers were under the age of 45 years (87%); held a master's degree (79%); could spend 5% to 20% of their work time doing research (63%); and taught courses that involved little research activities or research-related course materials (e.g., *College English*) (84%). The

number of years of teaching experience but also research experience were roughly equivalent. In addition, 38% of the teachers had studied in the US, UK, Canada, or Australia for anywhere from three to twelve months. Only a small percentage of the teachers had actual teaching experience abroad. Table 4.1 presents more detailed information on the background characteristics.

Table 4.1
Overview of teacher background characteristics

Background characteristic		Number of respondents
Gender	Male/Female	49/98
Age	30 years or under	35
	31-35	42
	36-45	54
	46-55	17
	56 or over	2
Educational background	Bachelor's	24
	Master's	117
	Doctorate	7
Institutional background	Research intensive university	54
	Non-research intensive university	37
	Missing	61
Research experience (years)	Less than 3	41
	Between3-10	75
	More than 10	31
Teaching experience (years)	Less than 5	33
	Between 5-10	33
	Between 10-15	40
	More than 15	43
Time spent doing research (percentage of total work time)	0%	14
	5% to 20%	87
	At least 25%	38
Course type	Non-research focus	124
	Research focus	8
	Both	16
Learner type	Language major	40
	Non-language major	73
	Both language and non-language majors	24
Study abroad	No/Yes	92/56
Teaching abroad	No/Yes	125/19

4.2.2 The questionnaire

The design of this questionnaire has been described in full in Chapter 2. The core section of the teacher questionnaire encompassed seven scales addressing the role of research in teaching, in general, and the teachers' beliefs about the ideal role of research in teaching and the teachers' perceptions of the actual role of research in their own teaching, in particular. The role of research in teaching in the survey study refers to the goals of integrating research into teaching. In other words, it is about the learning outcomes for the students intended by the teachers in their integration of research into teaching (see section 2 in Appendix 1).

The seven scales for the core of the teacher questionnaire were thus: 1) developing creative disposition; 2) developing critical disposition; 3) fostering student research interests; 4) enhancing research skills; 5) prompting student reflection on research; 6) familiarizing students with current research; and 7) encouraging student participation in research. The same questions were posed with regard to the teachers' ideal and actual teaching situations. More detailed information about the scales and their measurement reliabilities can be found in Table 4.2.

Table 4.2

Seven scales and reliability of their measurement (Cronbach's alphas) for teacher beliefs and perceptions regarding the role of research in teaching

Scale	α	Sample item
Ideal/Beliefs		***Ideally*** in my teaching, I would…
Creative disposition	.85	• foster students' sense of innovation.
Critical disposition	.83	• stimulate students to not be easily satisfied with an explanation.
Student research interests	.76	• encourage students' interest in research.
Research skills	.81	• increase students' ability to conduct research.
Current research in the domain	.84	• make links to current research practices.
Reflection on research	.80	• stimulate students to learn about research findings.
Students as participants	.78	• ask students to make a contribution to research.
Actual/Perceptions		In my ***actual*** teaching practice, I…
Creative disposition	.85	• foster students' sense of innovation.
Critical disposition	.83	• stimulate students to not be easily satisfied with an explanation.
Student research interests	.77	• encourage students' interest in research.
Research skills	.81	• increase students' ability to conduct research.
Current research in the domain	.85	• make links to current research practices.
Reflection on research	.85	• stimulate students to learn about research findings.
Students as participants	.85	• ask students to make a contribution to research.

The questionnaire that we administered also included questions regarding the demographic and background characteristics of the teachers, including gender, age, institutional background, years of teaching experience, years of research experience, time spent doing research, type of course taught, type of learner taught, study and teaching experience abroad.

In addition to the core questionnaire items and background questions, we also included an open-ended question. Teachers were asked to give specific reasons for any discrepancies they perceived between their ideal beliefs and actual perceptions regarding the role of research in university teaching. Only 30 teachers (20% of the respondents) replied to this open-ended item: 11 from research intensive universities; 11 from non-research intensive universities; and 8 from unidentified universities.

4.2.3 Data analysis

We applied nonparametric tests to analyse our data because the assumptions of normality and homogeneity of variance were not met by most of the questionnaire scales.

To answer our first research question and thus determine the relationship between the teachers' beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their current teaching, we applied Wilcoxon signed-rank tests.

To answer our second research question and thus determine how the background characteristics of the teachers relate to their perceptions of the actual role of research in their teaching, we applied Kruskal-Wallis tests. The 61 respondents lacking information on the type of university for which they worked were excluded from the analysis where the institutional background was investigated.

Finally, to explore the explanations provided by the teachers themselves for the discrepancies between their beliefs about the role of research in teaching, on the one hand, and their perceptions of the actual role of research in their own teaching, on the other hand, we analysed their responses to the open-ended question. We first identified all of the reasons mentioned by the teachers and assigned descriptive codes to these. We then grouped the descriptive codes into more general descriptive categories. In the end, three core categories of explanation could be identified for the data: reasons pertaining to the institution, the students and the teachers themselves.

4.3 Results

4.3.1 The role of research in teaching

When the teachers' beliefs about the ideal role of research in teaching were analysed in relation to their perceptions of how they have managed to incorporate

research into their own teaching, major discrepancies were detected. The median scores and Wilcoxon signed-rank test results are displayed in Table 4.3.

Table 4.3
Comparison of university teachers' beliefs about and perceptions of the role of research in teaching (Wilcoxon signed-rank test)

Scale	*n*	*Median*		*Z*	*r*
		Ideal	Actual		
Creative disposition	112	4.33	3.33	-8.24***	.55
Critical disposition	110	4.13	3.00	-8.79***	.59
Student research interest	112	4.00	3.00	-8.26***	.55
Research skills	112	4.00	2.67	-8.44***	.56
Current research in the domain	111	4.00	2.67	-8.10***	.54
Reflection on research	112	3.75	2.50	-8.85***	.59
Students as participants	109	3.75	2.50	-8.46***	.57

* $p < .05$. ** $p < .01$. *** $p < .001$.

Significant gaps were found between the teachers' beliefs about the ideal role of research in teaching and their perceptions of the incorporation of research into their own actual teaching for all seven scales with large effect sizes in all cases (*r* above .50). This finding shows that even though the teachers may strongly believe that research should play an important role in teaching, they are not necessarily integrating research into their current teaching practices.

Inspection of the median scale scores showed the seven aspects of the role of research in teaching to be ranked differently by the teachers for both ideal and actual teaching situations: The development of students' creative dispositions ranked highest; encouragement of student participation in research and student reflection on research ranked lowest. This pattern of findings suggests that teachers consider fostering students' creativity the key role for research in teaching; encouraging student participation in research and encouraging reflection on research were considered less important by the teachers in our study.

4.3.2 Relationship between teacher background characteristics and teacher perceptions

To further understand the gaps detected between the teachers' beliefs about the role of research in teaching and their perceptions of the actual role, we explored how a number of background characteristics of the teachers relate to their perceptions of actually integrating research into their teaching. Kruskal-Wallis tests were used, and three patterns of associations occurred (see Table 4.4).

First, the teachers' institutional background appeared to matter more than their other background characteristics. Teachers who came from research intensive

universities had significantly higher perceptions of how well they integrate research into their own teaching practices than teachers from non-research intensive universities.

Table 4.4
Relations between background characteristics of teachers and their perceptions of the integration of research into actual teaching (Kruskal-Wallis tests)

Scale	Institutional background [a]	Research experience [b]	Time spent doing research [c]	Learner type [d]	Study abroad[e]
Creative disposition	+	ns	ns	ns	ns
Critical disposition	+	ns	ns	ns	ns
Student research interest	+	ns	ns	ns	ns
Research skills	+	+	++	ns	ns
Current research in the domain	ns	ns	ns	ns	ns
Reflection on research	ns	++	++	ns	ns
Students as participants	+	+	+	ns	ns

Note. [a]Mean ranks: non-research intensive universities, research intensive universities; [b]Mean ranks: less than 3 years, 3-10 years, more than 10 years; [c]Mean ranks: 0%, 5%-20% , 25%; [d]Language major, non-language major, mixed; [e]Studied abroad or not.
ns $p > .05$. + $p < .05$. ++ $p < .01$.

Second, the amount of research experience and time spent doing research mattered most for the teachers' perceptions of three aspects of the integration of research into their current teaching: Developing research skills, encouraging student reflection on research, and encouraging student participation in research. Those teachers with more than 10 years of research experience scored significantly higher than those with 10 or less years of experience. Those teachers who spent 25% or more of their work time on research were similarly more positive about these aspects of the integration of research into their teaching than those who spent 5%–20% of their work time on research and those who were currently not involved in research.

Third, no significant differences were found in teachers' perceptions of how they integrate research into their teaching when the type of learner was considered or the teachers' experiences with study abroad were considered. That is, the perceptions of the integration of research into their own teaching did not differ for those teachers who taught language major students versus those who taught non-language major students. The perceptions of the integration of research into their own teaching also did not differ for those teachers who had studied abroad versus those who had not.

4.3.3 Teacher explanations for the gap

In an open-ended question the teachers were asked to offer possible explanations for the ideal-actual gap experienced in the integration of research into teaching. Three general sets of reasons were mentioned by the teachers: structural aspects of the institutions; motivation and abilities of the students; and motivation and research training of the teachers (see Table 4.5).

Table 4.5
Frequency of explanations offered by teachers for discrepancies between ideal and actual integration of research into teaching (n = 30)

Category	Non-research intensive university (*n* = 11)	Research intensive university (*n* = 11)	Unknown (*n* = 8)
Institutional			
lack of time	2	2	3
fixed curriculum	2	1	2
central aim of the language courses	2	2	-
big class size	-	1	1
lack support for student research	-	-	1
Students			
lack of motivation	3	5	3
weak language abilities	3	-	2
Teachers themselves			
lower status of the course in general	3	-	-
lack of teacher motivation	-	4	-
lack of research training/experience/knowledge	1	-	2

Structural aspects of the institution were mentioned most often by the teachers as a source of difficulty for the integration of research into actual teaching practice. The teachers from the research intensive universities mentioned the same aspects of the institution as the teachers from the non-research intensive universities. One aspect was lack of time or, in other words, being too busy with heavy teaching tasks to even think about ways to incorporate research into teaching. Another aspect was a fairly fixed curriculum that thus allowed little or no room for teachers to incorporate elements of research into their teaching. A third aspect of the institution involved difficulties reconciling integration of research into teaching with the institutional aim of improving student language proficiency. Or, stated differently, it could be a problem of not seeing the relevance or value of integrating research in teaching for language learning. A few of the teachers also mentioned large class sizes and a lack of support for student research as reasons for the ideal-actual gap for the incorporation of research into teaching.

Student motivation and weak language abilities were mentioned second most often by the teachers as a possible explanation for the ideal-actual gap. Eleven teachers mentioned a lack of student motivation for involvement in research activities due to an interest in mostly passing the language exams and mastering the practical skills of fluent speaking, listening, reading, and writing. Five of the teachers mentioned weak language skills, which appeared to be particularly problematic for the teachers working at the non-research intensive universities.

The third set of possible reasons mentioned by the teachers for the ideal-actual gap involved the teachers themselves. The teachers from the different types of institutions mentioned different reasons, however. The teachers from the research intensive universities mentioned not being motivated to incorporate research into their teaching. This is perhaps due to an overwhelming emphasis on teachers' own research performance as opposed to their integration of research into teaching. The teachers from non-research intensive universities reported that college English is not considered as important as other core courses in the Bachelor's program. It is likely that this perceived lower status for language education therefore did not motivate them to improve their teaching in this respect. Three teachers (one from the non-research intensive universities, and two from the unknown group) also mentioned that they seldom had the time or opportunity for research training. This implies that they therefore lacked sufficient research experience and knowledge to include research in their teaching.

4.4 Discussion and conclusions

Regarding how teachers' beliefs about the ideal role of research in teaching relate to their perceptions of actually integrating research into their ongoing teaching practice, a significant gap was detected. Moreover, the teachers considered the integration of research into teaching to stimulate a creative disposition on the part of students most important; encouragement of student participation in research and reflection on research were considered least important.

To better understand the ideal-actual gap, we found the teachers who perceived to have better integrated research into their teaching practice to come from research intensive universities, had more years of research experience and spent more time doing research. The type of learner being taught (i.e., language or non-language majors) and teacher experiences with studying abroad did not relate to their perceptions of how they have integrated research into their actual teaching. Teachers themselves also mentioned a couple of additional limiting factors that contribute to this gap: institutional factors (lack of time, heavy teaching tasks and fixed curricula); lack of student motivation and insufficient English proficiency; lack of teacher motivation and low status of language teaching within the institution.

4.4.1 Highly valued but not practiced: Integrating research into language teaching

The finding that the teachers in our study highly valued the incorporation of research into English language teaching can be considered surprising. This is because the teaching of English as a foreign language (EFL) to students in China is overwhelmingly concentrated on the development of language proficiency, which is widely assumed to not be achieved via the incorporation of research into teaching practice. The fact that the teachers still value the incorporation of research into teaching thus comes as a surprise.

The reasons for the teachers in our study highly valuing the incorporation of research into their teaching probably stem from the imposition of Western educational ideas on the Chinese education system (cf. Dang, 2013; Grigorenko, 2007). Higher education in China has not only adopted Western education models (Altbach, 1989), it also features many scholars educated in the West and frequent visits from scholars coming from the West. International research cooperation and student exchange programs have also presumably promoted the adoption of Western educational ideals (Dang, 2013). In 1998, the Boyer Commission in the USA stimulated the engagement of all undergraduate students in research. Other Western scholars have pointed out that the integration of research into teaching heralds a new way of learning and teaching that can better prepare students to function in a highly complex and ever changing world (e.g., Brew, 2003). And the idea of integrating research into teaching was easily introduced into higher education in China.

Another reason for the teachers in our study highly valuing the incorporation of research into teaching may stem from the Chinese teachers, indeed, perceiving an increased need to prepare students to function in a highly complex world. While establishment of language proficiency is the central task of current higher language education in China, this focus may shift in the near future. For example, as the national level of English language proficiency improves, the further development of these abilities may not be as urgent as today. As the economy of China grows, moreover, the society is changing into a knowledge society, which means that students must develop the skills needed to deal with the massive amounts of information that characterize a knowledge society. Perhaps some awareness of these changes has predisposed Chinese university teachers to adopt the Western idea of integrating research into teaching in order to adequately prepare students to function in an increasingly complex world.

It is worrisome to see such a large gap between the positive beliefs of the teachers about the ideal role of research in teaching and their low perceptions of the actual incorporation of research into their own teaching practices. This ideal-actual gap can nevertheless be explained by the previously observed mismatch between what research-based teaching can presumably achieve and the institutional aims of attaining maximum language proficiency. The teachers in our research believe that

the integration of research into teaching can be used to promote a creative disposition on the part of students, but current approaches to language education in China require a focus on the promotion of English language proficiency. China has a 1,000 year old history of using imperial examination to produce state officials (Niu, 2007). Education has also often been used as an instrument for governance (Hayhoe & Zha, 2006). Such a cultural legacy, together with the internationalization of the Chinese economy, has made it necessary to focus on improving the language abilities of students in China. Today's language curriculum has been designed to achieve this goal, which means that students also enter such courses with the aim of improving their language abilities. These social-cultural and economic conditions can nevertheless create tensions for language teachers who want to meet the broader needs of students and therefore integrate research into their teaching practices. This assumption is confirmed by the teachers in our research mentioning a fixed curriculum, lack of student motivation, and low level of student language proficiency as reasons for the discrepancies between what they would like to do and what they have managed to do with respect to the integration of research into teaching.

In addition to the mismatch of the desired versus actual purposes of higher education language instruction in China today, the way teacher performance is assessed may also indirectly contribute to the ideal-actual gap observed for the incorporation of research into teaching. University language teachers clearly have a teaching focus in their work, but their performance and particularly promotion possibilities are assessed in close consideration of their research performance (cf. Bai et al., 2013). This way of assessing may account for our finding that higher education language teachers feel largely undervalued, on the one hand. On the other hand the teachers are not encouraged to adjust their teaching practices to include research components in their current teaching. The teachers have to surmount various barriers if they want to do so against the institutional aims of maximizing language proficiency. And any teacher efforts to integrate research into their teaching may also go largely unrecognized and definitely not be rewarded within the current system with the emphasis on maximizing language proficiency. These mismatches, tensions, and thus the ideal-actual gaps experienced by university language teachers are not expected to disappear in the near future.

To gain further insight into the worrisome ideal-actual gap, we also analysed the teachers' perceptions of the integration of research into their own teaching practices in relation to their professional background characteristics. The most relevant background variable was found to be the type of institution that the teacher worked for. Teachers from research intensive universities perceived the actual integration of research into their own teaching more positively than teachers from non-intensive research universities. Research intensive universities have been, by definition, engaged in research for a much longer period of time, have an

established research culture, and typically receive more research support from the Chinese government (cf. Altbach, 2009; Hayhoe & Zha, 2006).

In keeping with the above, more years of research experience and more time spent on research during work were also found to be associated with more positive perceptions of the teachers' actual integration of research into their teaching. This shows both research experience and time for research to affect a teacher's perception of incorporating research into their actual teaching practice. This finding was further confirmed by our finding that the teachers explicitly mentioned a lack of research experience and lack of time as obstacles to the integration of research into their teaching. Lack of time appears to be a universal problem for academics engaged with both research and teaching (Bai, Millwater, & Hudson, 2013). Lack of time affects not only their endeavours to do research but also their endeavours to integrate research into teaching as found to be the case in the present study.

In contrast to the above, those teachers with experience studying abroad did *not* perceive the integration of research into their teaching more positively than those with no such experience. This finding can be interpreted in two ways: Either that the local situation is too dominant to be influenced by the ideas of teachers returning from abroad or that the experiences of those teachers who have studied abroad for a couple of months have been too short to exert any observable effects on their subsequent teaching. In future research, the length and quality of the experiences of teachers studying abroad should be further examined in conjunction with their teaching in a Chinese context. Does a longer period of study abroad foster integration of research into subsequent teaching in China? And what other aspects of the study abroad experience appear to be important?

4.4.2 Closing remarks

Our findings show the Chinese language teachers to highly value the idea of integrating research into teaching but nevertheless a major gap exists when it comes to their actual integrating research into their own teaching. We found a number of constraints to contribute to this gap, but the biggest appeared to be the mismatch between the current aim of maximizing language proficiency and the need to prepare students for functioning in a complex world. Our findings show that the application of Western educational ideas within a Chinese context is a highly complex task that must be done with utmost care and attention to possibly conflicting traditions and local norms. The relevance and applicability of the Western ideas must be carefully assessed. And in the present case, the incorporation of research into university language teaching may need a reconsideration.

Perhaps research need not be integrated into *every* teaching course. It is possible, for example, that the current language education curriculum in Chinese universities should be made more flexible and teachers given room to decide what

to do themselves. For instance, conditions for the integration of research into teaching may differ depending on the level of teaching and level of language proficiency. Managers, policy makers and university teachers should certainly be encouraged to have dialogues among each other regarding these aforementioned issues. Topics of such dialogues may include, for example, how to explore ways to incorporate research into their teaching of different types of courses and thereby discover whether and how the inclusion of research in their teaching can possibly lead to new ways of teaching and improving the language abilities of students. And if it is decided to integrate research into a particular type of course, findings in this chapter can help to raise awareness of a gap in the beliefs versus actual practices of teachers concerning research integration into teaching. More support should be provided for the teachers' endeavours to do this. For example, the evaluation of professional performance should take the integration of research into actual teaching into account. Once the merits of integration of research into university teaching are better appreciated within the Chinese educational environment (cf. Clark, 1997), Chinese teachers will have or can develop the capacity to better integrate research into their actual teaching.

Chapter 5

The role of research in university teaching: Comparing practices of master's thesis supervisors from China and the Netherlands [5]

[5] This chapter has been submitted for publication in an adapted form as:
Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (under review). What does it mean to supervise a master's thesis? A comparison of Chinese and Dutch practices.

Abstract

We explored which learning outcomes supervisors of master's theses in two cultures wanted their students to achieve and how supervisors helped students to achieve these learning outcomes. Semi-structured interviews were conducted with ten Chinese and ten Dutch supervisors from university language and culture departments. With regard to identified learning outcomes, the Chinese and the Dutch supervisors highly resembled each other: Both considered the development of research competencies (e.g., critical disposition, research process, academic writing) to be the core learning outcomes. Clear differences were nevertheless also observed and reflected in the intention of the Chinese supervisors to prepare their students for a future job versus the Dutch supervisors' aim of preparing students to function in a rapidly changing, increasingly complex and often uncertain world (i.e., research thinking, foster student well-being). With regard to the support reported to be provided by the supervisors, the Chinese and Dutch supervisors again resembled each other in that they both employed a variety of support types. They nevertheless differed in how they used certain types of support. For example, the Chinese supervisors generally reported more overt assessment and control as a reported form of support, while the Dutch supervisors reported being much more covert about this and frequently posing questions to monitor student process and well-being. Dutch supervisors, in contrast to Chinese supervisors, also considered providing emotional support to be important. Our findings thus provided a concrete picture of the actual integration of research into teaching. The differences found between the two groups of supervisors in this interview study may have their roots in differing educational traditions, differing social-economic conditions in the two countries and differing education systems. The differences identified can be particularly helpful for supervisors to become more aware of possible areas of conflict for students from different cultural backgrounds. In addition, the variety of intended learning outcomes and support reported by the Chinese and the Dutch supervisors provides a reference for teachers to integrate research into other types of university teaching, which could involve less student involvement and in parts of a research process.

5.1 Introduction

As Healey (2005, p. 183) puts it, "linking research and teaching is a topic of international interest." Both the Humboldtian tradition of education through research (cf. Simons & Elen, 2007) and, e.g., the Boyer recommendation (Boyer Commission, 1998) call for the engagement of university students in research and thereby integration of research and teaching. This is because the unity of research and teaching represents the academic identity of the modern university, but also because research and teaching are thought to be mutually beneficial (Neumann, 1992; Robertson & Blackler, 2006; Robertson & Bond, 2001). In addition, combining research and teaching introduces a new way of teaching and learning which will more adequately prepare college students to function in an ever changing, often uncertain and increasingly complex world (Brew 2003).

Previous studies have focused on either the correlation between research productivity and teaching effectiveness as separate activities (e.g., Hattie & Marsh 1996) or academic's beliefs about how the domains of research and teaching should, in principle, relate (e.g., Neumann 1992). A concrete picture of how research and teaching actually connect at the university is thus not available.

One way of gaining insight into the actual integration of research and teaching is to examine university programmes which are already aimed at engaging students in research. These can be found — for instance — in the UK (e.g., Healey, 2005), Australia (e.g., Brew, 2003) and the Netherlands (van der Rijst et al., 2013). Particularly, in the master's programmes at many institutions, the students must conduct their own research under the guidance of a supervisor. Therefore, as similarly argued by Clark (1997), the supervision of master's theses can serve as natural locales of a tight blending of research activities, teaching activities and student learning.

5.1.1 Student perspectives

Students perceive many benefits of involvement in a research intensive environment. These include learning from staff research; perceiving research staff and courses as having greater credibility than non-research staff and courses; enthusiastic staff; and the glory of being taught by well-known researchers (e.g., Healey, Jordan, Pell, & Short, 2010). Students involved in undergraduate research projects have been found to better understand the nature of research and to develop the necessary research skills in addition to sometimes perceiving benefits for their future employment (Healey et al., 2010; Hunter, Laursen, & Seymour, 2007). Higher levels of intellectual development have also been reported (Healey & Jenkins, 2009). And on the basis of the results of a recent study, van der Rijst et al. (2013) concluded that involvement in research projects can increase student motivation and writing about research stimulates the development of a research disposition (i.e., critical inquiry). For the master's theses, Anderson, Day and

McLaughlin (2006) pointed out gains such as making a contribution to knowledge, mastering research skills, adopting an active defence of one's stance on a topic, and benefits of a questioning and analytical view for student professional practice.

Students also perceive disadvantages of being involved in the research intensive environments. The experienced disadvantages may include: feeling excluded from the research community (Robertson & Blackler, 2006; Zamorski, 2002); frustration at not being able to see the relevance of ongoing research to current learning (Robertson & Blackler, 2006); and unavailability of staff (Healey et al., 2010).

The disadvantages of involvement in a research intensive environment for students imply a field of tension between research and teaching. The disadvantages also suggest that new ways of combining and integrating research and teaching must be sought.

5.1.2 Teacher perspectives

Little is known about the capacity of teachers to combine research with teaching to make students capable of critical inquiry. Both teachers and students have been repeatedly reported to think that there should be a positive connection between research and teaching (Neumann, 1992; Robertson & Blackler, 2006). However, other researchers have reported no correlation whatsoever between research quality (i.e., productivity) and teaching quality (i.e., student evaluations) (e.g., Hattie & Marsh, 1996). Recent discussion on the relationship between research and teaching shifted its focus on research integration into teaching in forms of inquiry based learning (Brew, 2003) and undergraduate research projects (Healey, 2005). Particularly, Healey (2005) proposed a model with four ways of research integration into the curricula: research-led; research-oriented; research-based; research-tutored. In line with this model, Healey and Jenkins (2009) reported a variety of undergraduate research projects in universities from the UK, the US, Canada and Australia.

Although the need to integrate research and teaching is recognized at most universities today, just how this should be done is quite unclear for many teachers. What learning outcomes should students achieve when research and teaching are combined? What support should teachers provide when research and teaching are combined?

Even less is known about how teachers from Asian and non-Western countries deal with the challenge of integrating research and teaching. Western educational practices are becoming dominant throughout the world (Grigorenko, 2007) and Western educational ideas are travelling fast between nations (Dang, 2013), which means that teachers in non-Western countries may be struggling with the same issues as teachers in Western countries. However, Asian and European/Western countries have very different educational traditions, social-economic conditions and corresponding education systems (cf. Altbach, 2009),

which means that comparison of how they combine research and teaching may be particularly informative.

5.1.3 Research questions

In this chapter, we took the supervision of master's theses as a case in point, and examined the integration of research and teaching in China and the Netherlands. We investigated the learning outcomes which Chinese and Dutch supervisors considered to be important for their students, on the one hand, and how supervisors helped their students achieve these learning outcomes, on the other hand. In such a manner, we were also able to explore the similarities and differences between the Chinese and Dutch supervisors and provide greater insight into the ways in which research and teaching are integrated in higher education. We posed the following research questions.

- What learning outcomes do Chinese and Dutch supervising teachers want their master's students to achieve through a master's thesis?
- How do Chinese and Dutch supervising teachers support their master's students to achieve these learning outcomes?

5.2 Educational traditions in China versus the Netherlands

China and the Netherlands differ radically with regard to their educational traditions and respective education systems.

The Chinese educational tradition has been largely shaped by Confucian teaching with its emphasis on 1) moral education and the cultivation of benevolence as the ultimate goals of education (Niu, 2007); 2) the importance of knowing though reflection (Wong, 2011); and 3) the emulation of those who have achieved supremacy of virtue and intellectual development (i.e., one's seniors) (Yang, 1993). Chinese education and particularly the Imperial Examination system (IE) have relied upon rote learning and memorization of the Confucian classics as the primary instructional methods, while exam results which are based on this instruction are used to appoint high-ranking officials (cf. Hayhoe & Zha, 2006; Niu, 2007). This tradition has existed for a long time in Chinese history and still plays a role in the current Chinese education in the form of the National College Entrance Exam (NCEE), which determines not only college admission but also the later social and economic status of individuals (cf. Niu, 2007). That is, higher education in China today is primarily used as an instrument to stimulate economic development and produce a sufficiently educated work force for the rapidly developing economy (Hayhoe & Zha, 2006). In keeping with this, enrolments in higher education have greatly increased in China since 1998 (Wang & Liu, 2011).

In contrast, Western education has been shaped by the teachings of the ancient Greek philosophers and primarily aimed at 1) the pursuit of objective knowledge via scientific inquiry and 2) use of the Socratic method (i.e., the

systematic exchange of questions and answers) (cf. Hummel, 1994). Within this system, the teacher ideally does not impart information directly to students but, rather, encourages students to examine and explain their assumptions, ideas and answers to questions which they have also posed themselves (Shim, 2008). A later but equally important development in the goals of Western education can be found in the Humboldtian tradition for universities, which emphasizes the development of personality or, in other words, the inner self which is considered individualistic, self-motivated and non-utilitarian (Pritchard, 2004). Within this tradition, the unity of research and education is also emphasized for the production of not only knowledge but also the development of the core competencies needed by students to become productive citizens (Simons & Elen, 2007).

5.3 Organization of thesis supervision in China versus the Netherlands

In the Chinese context, though with variances among universities, master's students are often supervised in small groups which include several (between three to five) students. The quality of the thesis has to be approved normally by one academic from the student's own university and another from a different university. The approval is required before the students can defend a thesis, and only when the thesis has been successfully defended is a master's degree awarded. In most Chinese universities, the thesis is an important part of a three-year master's programme although some programmes take only two years. Usually the students formulate the research proposal half way through the programme and complete the thesis during the final year. The supervisor-student relationship is established upon admission to the programme. The supervisor supervises the completion of the entire master's programme and particularly the thesis.

In the Dutch context, master's students are typically supervised individually. The supervisor and a second reader (often from the same university and not involved in the supervision process) together determine the final grade for the thesis, which is an important part of the one-year master's programme and the research master's which can sometimes take two years (de Kleijn, Mainhard, Meijer, Pilot, & Brekelmans, 2012). Students can 'shop around' at the beginning of the second semester to find a thesis supervisor. This is done on the basis of the student's interests and the expertise of the supervisor. Students at Dutch universities may also attend research seminars, courses and thesis workshops which address methods of data analysis and academic writing prior to the start of their thesis. Most programmes also provide a thesis guide or outline of the steps for completing the thesis.

5.4 Method

Semi-structured interviews were conducted with Chinese and Dutch thesis supervisors. All interviews were audiotaped and lasted an average of 50 minutes.

The interview guide consisted of two parts. Part one asked the supervisors about their experiences with the best master's thesis supervised by them to date. This was done in order to attain concrete examples of the learning outcomes identified by the supervisors and insight into how they helped their students achieve these outcomes. Part two asked about the learning outcomes which the supervisors would generally want their master's students to achieve, the ways in which they support the achievement of these outcomes and their perceptions of the relevance of the learning outcomes for the development of their students in the future.

Table 5.1
Supervisor background information

Background		Chinese (n = 10)	Dutch (n = 10)
Expertise [a]	Linguistics	6	7
	Literature	2	3
	Language teaching	2	2
Gender	Male	5	5
	Female	5	5
Age (years)	31-40	3	1
	41-50	4	3
	51-60	3	5
	60+	0	1
Highest degree	Master's	5	2
	PhD	5	8
Study abroad	yes	8	8
Research experience (years)	5-10	1	3
	10+	9	7
Supervising experience (years)	1-3	1	2
	3-5	4	0
	5-10	3	2
	10+	2	6

Note. [a] Two of the Dutch supervisors reported expertise in two of the three categories.

The interview guide was piloted with experienced supervisors from the target universities in China and the Netherlands. The interviews with the Chinese

supervisors were conducted in Chinese. The interviews with the Dutch supervisors — who have more frequent exposure to English and are also more fluent in English than the Chinese supervisors — were conducted in English.

5.4.1 Participants and sampling

Ten thesis supervisors from a research university in a metropolitan area of Southwest China and ten experienced supervisors from four Dutch research universities were selected for interview. To minimize the possibility of disciplinary effects (cf. Stodolsky & Grossman, 1995), we only interviewed supervisors from the language and culture departments. An overview of the supervisor background information can be found in Table 5.1.

5.4.2 Data analysis

First, the interviews were transcribed verbatim and the Chinese interviews were then translated into English. The ATLAS.ti 5.2 qualitative analysis software was used to iteratively analyse the data. This included several phases. Starting with one of the interview transcripts, two researchers worked independently to identify interview fragments which referred to learning outcomes, then assigned descriptive codes to the selected fragments. The two researchers then discussed their descriptive codes until consensus were reached on the identification of fragments and descriptive codes.

Second, one of the researchers applied the same process to two other interview transcripts. Interview fragments referring to learning outcomes were identified. Interview fragments which referred to the support provided were also identified. The selected fragments were then assigned descriptive codes.

Third, the same researcher involved in the first two phases together with a third researcher categorized the descriptive codes to develop a tentative coding scheme. Using this coding scheme, the first researcher coded an additional three transcripts. New codes were created and categorized as needed, and the coding scheme was discussed and adjusted accordingly. After several rounds of such coding adjustment, the coding of all transcripts was complete and only a few new codes emerged from the data. The now relatively stable coding scheme was discussed among the researchers. And all of the interviews were then checked and some of them recoded in places.

As an additional step to ensure reliability of our analysis, we checked the inter-rater agreement, thus a fourth researcher was involved. The first and the fourth researcher both coded one-third of one Chinese and one-third of one Dutch interview transcript independent of each other. The results were compared and discussed to clarify any disagreement about the descriptions of the codes. After consensus was reached on the code descriptions, another round of coding was conducted by the same two researchers. For the third round of independent coding,

the strength of agreement was moderate (Landis & Koch, 1977) with a kappa of .60 and a rater agreement of 64.0%.

5.4.3 Final coding scheme

Five core categories emerged from the data concerned the intended learning outcomes: research competencies, general competencies, value of student research, student well-being and preparation for future career. Detailed descriptions of these five categories and illustrative examples can be found in Appendix 2.

Two core categories emerged for support: tangible and intangible support. Tangible support refers to supervising which deals directly with content and activities which can be seen or heard. Six subcategories of tangible support which ranged from teacher-focused to student-focused activities further emerged: teacher resources, lecture and tell, teacher modelling, discussion, posing questions and student tasks. Intangible support refers to supervising which does not deal directly with content or activities. Four subcategories of intangible support emerged from the data: adaptive supervision, assessment and control, emotional support and teacher dedication. More detailed descriptions of the two categories and illustrative examples can be found in Appendix 3a for tangible support and Appendix 3b for intangible support. Descriptions of the subcategories were also provided since they were complex and important to capture the variety of the support strategies.

5.5 Results

Though the Chinese and the Dutch supervisors were more similar than different, we have chosen to report in detail on the differences, while just briefly mentioning the similarities between them. In relation to this choice, we have also focused on a selected number of subcategories with clear differences. This choice was *not* made to emphasize the differences, but to describe the richness of different learning outcomes intended and the different types of support provided by the Chinese and the Dutch supervisors. It should be noted that not all subcategories are covered in the illustrations following Table 5.2 and Table 5.3.

In the text, we refer to the individual supervisors as Chinese supervisor number 1 (C1), Chinese supervisor number 2 (C2), Dutch supervisor number 1 (D1), Dutch supervisor number 2 (D2), and so forth.

5.5.1 Intended learning outcomes

In general, the Chinese and Dutch supervisors were very similar: Both considered the development of research competencies to be among the core learning outcomes for students. The Chinese and Dutch supervisors also differed in several respects. The Chinese supervisors talked more about the development of general competencies and improved language abilities in particular. Both talked about the value of student research although the Chinese supervisors emphasized more the

importance of publishing while the Dutch supervisors focused more on knowledge contribution. They also clearly differed on what they considered the ultimate learning outcome: prepare students for their future career (China); student well-being and contribution to the knowledge base (the Netherlands).

In the following, we describe the similarities and differences for each category. These are also summarized in Table 5.2 from most similar (top) to most different (bottom). The number in the parenthesis following each subcategory refers to the number of supervisors who talked about that subcategory in their interview.

Table 5.2
Intended learning outcomes identified by Chinese versus Dutch supervisors for master's theses

Core category	Chinese (n = 10)	Dutch (n = 10)
Research competencies	• Research process (7) • Critical disposition (8) • Academic writing (8) • Independence/research (5) • Research interests (2)	• Research process (8) • Critical disposition (5) • Academic writing (7) • Independence/research (7) • Research interests (5)
General competencies	• Language abilities (7) • Social and communication skills (4) • Problem solving/logical thinking (4) • General knowledge (4) • Strict attitude (3)	• Language abilities (2) • General critical attitude (3) • Problem solving/dealing with complexity and pressure/organizing (5) • Oversee field (2) • Communication (1) • General knowledge (1) • Independence/general (1)
Value of student research	• Publish papers (5) • Contribution to the knowledge (3)	• Contribution to the knowledge (8) • Publish papers (3)
Student well-being	• Integrated education/sense of accomplishment (2)	• Confidence/self-esteem/sense of achievement/talent/satisfaction(6)
Preparation for future career	• Help to graduate/job opportunities/compete on the job market (10)	• Not an aim for MA education (2)

Research competencies

Research competencies was the most frequently mentioned core category of learning outcomes mentioned by both the Chinese and the Dutch supervisors. The mentioned competencies included learning about the entire process of doing research (e.g., choice of research topic and suitable research questions, critical reading of literature, study design, data collection, data analysis, clear writing and

presentation of results). They also included developing a critical disposition, developing independence in doing research and identifying own research interests. In the following, we have chosen to report in detail on these three subcategories.

Critical disposition. The focus of the individual supervisors varied at times, but they generally emphasized the importance of being critical along with the structure and coherence of academic writing.

They differed, however, on what they meant by 'critical'. The Chinese supervisors talked about critically examining the research literature to identify original research questions.

> *After reading two articles in the same area on the same issue, can you see similar or opposite views? What are the connections between them, what is your view?*(C3)

The Dutch supervisors talked about putting forth good arguments when criticizing the research literature and encouraging students to disagree with their supervisors and the research literature.

> *She has learned not to be afraid of criticizing existing literature. Even when that was written by one of the big names in the field. [….] the student has actually learned to say: okay even though Albert Einstein says it, I disagree, and this is why.* (D3)

There were also exceptions to the pattern observed for criticism. One Chinese supervisor indicated an intention to raise student awareness by pointing out that being critical was not picking at the faults of others: "You can either agree or disagree [….] students are here to do research, not to 'worship' the master pieces [by big names in the field]." (C9)

Independence/research. The Chinese and Dutch supervisors both talked about the intention for students to become independent researchers. However, the Dutch supervisors talked more about this being one of the most important learning outcomes and in conjunction with more phases of the research process than the Chinese supervisors.

> *The idea is really that the student should work independently, be able to process literature independently, be able to write independently.* (D9)

Research interests. Both the Chinese and Dutch supervisors indicated that the students' own research interests had to be the starting point for their thesis. Nevertheless, only two of the Chinese supervisors explicitly mentioned this, while five of the ten Dutch supervisors did and also pointed out the aim of making students enthusiastic about research at the same time. The Dutch supervisors typically mentioned this point spontaneously and without prompting by the interviewer.

> *Aah, yes! to discover how nice it is to do research.* (D2)

> *I always encourage students to write about something that they already feel passionate about, and if not passionate, highly interested.* (D8)

General competencies

The supervisors also paid attention to the development of general competencies such as language abilities, knowledge acquisition, communication skills, problem-solving skills, coping with pressure and complexity and the development of a generally critical attitude. Some of these competencies were transferable from the research competencies also mentioned by the supervisors. For example, the ability to critically examine the research literature can grow into a more general ability to critically examine information in society.

On the whole, the Chinese supervisors talked more in length about the general competencies to be developed and sometimes referring to them as important. They also mentioned more subcategories of these competencies than the Dutch supervisors.

Of the Chinese supervisors: Seven mentioned the need to establish basic language skills; four mentioned this for social and communication skills; four mentioned this for problem solving abilities and logical thinking; four mentioned this for the students' general knowledge; and three mentioned this for a strict attitude (i.e., earnest, careful, hard-working). Language ability was considered a very important learning outcome by the Chinese supervisors.

> *We require them to develop their language abilities, including reading, listening and speaking* […] *many aspects, thus.* (C1)

The Dutch supervisors not only talked less in length and mentioned fewer subcategories of the general competencies, they also focused more on the cognitive aspects related to research thinking than the Chinese supervisors. Of the Dutch supervisors, five mentioned an ability to solve problems, deal with complexity, cope with pressure and/or organize work; two wanted students to have a comprehensive view of the field, namely, "oversee field" (D9), "helicopter view of things" (D10), and three mentioned the development of a generally critical attitude.

> *They should be able to read something and not assume that it's right. […] That is what we want from our students. They should be able to read and write and discuss critically and intelligently.* (D3)

Two of the Dutch supervisors also explicitly mentioned improving the language abilities, but only in the case of supervising international students.

Value of student research

The Chinese supervisors mentioned the relevance of publication more often than the Dutch supervisors. Five mentioned the publication of papers as a way to measure and demonstrate the quality and value of the student research.

> *I encourage them to publish in good quality journals, and it must be journals on the CSSCI [China Social Science Citation Index] list.* (C9)

The Dutch supervisors, in contrast, talked more about contributing to a particular body of knowledge and thus having new ideas/insights. Eight out of ten mentioned the student's own "contribution to the field of research" (e.g., D4) or adding "some original thoughts" (D2). Some of the Dutch supervisors mentioned that publication in a journal was an overly high standard for a master's thesis and that they only considered doing this for an exceptionally good thesis. One of the Dutch supervisors referred to publication as an "extra goal" and observed that "we try to get them to publish in real journals" (D5). One supervisor, however, strongly disagreed with this idea and said that publication in journals was "old fashioned" and the aim nowadays has changed its focus on students to gain "an overview of the field" (D9).

Student well-being

The Chinese and Dutch supervisors clearly differed on student well-being as a learning outcome (i.e., student satisfaction, self-confidence, self-esteem, sense of achievement and development of talent). Six Dutch supervisors spontaneously mentioned some aspect of this. In the words of one:

> *What I think is very important is […] that they can develop themselves to the maximum. That's very important. [….] and that they are not frustrated because they have the feeling that they could have done much more or much better and we prevented them from doing that. That would be very bad.* (D4)

The Chinese supervisors rarely mentioned student well-being. On the occasions when they did, it was to develop not only the students' abilities but also their life values in order to make them "a person of integrity" (C2) or help them publish high-quality papers so that they could "have a great sense of accomplishment" (C9).

Preparation for future career

The Chinese and Dutch supervisors differed most strongly with regard to the preparation of the student for a future career. All ten of the Chinese supervisors mentioned this as an intended learning outcome. They mentioned improving the student's competences for employability via the practice gained with the thesis or helping the student to job opportunities. The Chinese supervisors reported helping the student graduate. One Chinese supervisor stated "it is worth encouraging students to attend conferences. There are many potential job opportunities" (C3).

In contrast, for eight of the ten Dutch supervisors, the intention to prepare students for a future job was only addressed implicitly, if at all, in the interviews. When they did this, it was largely as something which naturally happens at the end of the programme.

> *The aim of an MA is not preparation for the [labour market] […] I don't think the MA thesis is the best moment to prepare them for a job.* (D9)

When explicitly asked about the aim of preparing students for a future career/job, most of the Dutch supervisors responded that the aim of a master's thesis was to prepare students for their future personal or professional development.

> *It's valuable in its own right. And it helps them to reflect upon their lives or life in general, upon the world, society, culture, language in ways which are perhaps not economically productive but certainly humanly enriching.* (D8)

Two other Dutch supervisors (D1 & D3) mentioned primarily the relevance of developing a critical attitude for the professional development of the students in the future.

The following interview information further shows the Chinese and Dutch supervisors to obviously be interested in helping their students graduate but for very different reasons. In the words of one Chinese supervisor:

> *First of all, I help them graduate [….] The students are about to graduate soon. They are under great pressure to find a job. Writing the thesis has become part of the requirement for graduation, not just something they wanted to do from the heart. They are forced to write [a thesis].* (C6)

Another Chinese supervisor mentions a similar intention and then explains the situation.

> *Master's graduates can hardly get those research positions. They either teach or work in other fields […]. The first step is to get the degree, which is a unique phenomenon in China, where people take 'the degree' really seriously.* (C1)

This situation worried one of the Chinese supervisors:

> *We write the thesis simply for graduation […], not for the development of individual competencies. I think we kind of put the cart before the horse!* (C7)

In contrast, one Dutch supervisor expresses a similar intention as the Chinese supervisors but for very different reasons.

> *My first aim is to get the student to finish. [….] There's not the pressure to finish quickly because it's not so expensive to carry on financially. […] They get jobs before they graduate and suddenly they're too busy with the job or with life [to finish].* (D8)

And further, in the words of another Dutch supervisor, when talking about the supervision of an international student:

> *The degree stimulates insight into the processes of learning and teaching a language but also doing independent research and writing it up. […] all these things together are important for their professional development.* (D5)

5.5.2 Support

In reporting on the support provided by the supervisors, we start with a general observation of the similarities and differences between the Chinese and the Dutch supervisors, then narrow our focus on specific subcategories of the support provided. Thus, in the following we do not report on the findings for each subcategory, but report on a selected number of subcategories with clear differences between the Chinese and the Dutch supervisors.

An overview of the tangible and intangible support mentioned by the Chinese and the Dutch supervisors in our study is presented in Table 5.3 (see explanations for each subcategories in Appendix 3). The supervisors highly resembled each other with regard to the different types of support identified. With regard to tangible support, the most teacher-focused support (i.e., providing teacher resources) and the most student-focused support (i.e., giving student tasks) were most frequently mentioned by both the Chinese and Dutch supervisors. With regard to intangible support, both the Chinese and Dutch supervisors talked most frequently about adapting their supervision to individual student motivation, abilities and background education. The supervisors thus agreed upon the importance of individualized education.

Table 5.3
Support mentioned by Chinese and Dutch master's thesis supervisors

Core category	Chinese (n = 10)	Dutch (n = 10)
Tangible support	• Teacher resources (9) • Tell and lecture (9) • Teacher modelling (6) • Discussion (5) • Posing questions (6) • Student tasks (10)	• Teacher resources (10) • Tell and lecture (9) • Teacher modelling (8) • Discussion (9) • Posing questions (8) • Student tasks (8)
Intangible support	• Adaptive supervision (10) • Assessment and control (9) • Emotional support (7) • Teacher dedication (1)	• Adaptive supervision (9) • Assessment and control (7) • Emotional support (8) • Teacher dedication (5)

Nevertheless, the Chinese and Dutch supervisors also differed in several respects. To start with, they differed in the extent of their use of specific types of

support. While discussion was used by both, the Dutch supervisors mentioned discussion with students much more frequently and also for more stages and varied purposes during the supervision process than the Chinese supervisors. During the interviews, the Dutch supervisors appeared to be more dedicated to helping students learn than the Chinese supervisors.

The Chinese versus Dutch supervisors also differed in just how they combined the types of support. For instance, giving instructions (i.e., tell and lecture) and serving as an example (i.e., teacher modelling) were frequently mentioned by the supervisors from both countries, but the Chinese reported providing instruction and an example beforehand while the Dutch reported doing this only when the students encountered difficulties with a task or requested this.

Perhaps most importantly, the Chinese versus Dutch supervisors showed marked qualitative differences in the manner in which they provided specific types of support, namely: posing questions (tangible support), assessment and control and emotional support (intangible support). Therefore, in the following we reported in detail on these subcategories.

Tangible support

Posing questions. The Chinese supervisors generally talked less in the interviews about asking questions than the Dutch supervisors. They also differed in the manner they pose questions. The Dutch supervisors reported deliberately not supplying answers and therefore frequently posing questions in response to student questions instead.

> *They will ask 'should I put this in my code book?' I'll say 'did you see it in the data?' Then they go back to the data and say 'I didn't find it.' 'so what do you think?' [I ask.] 'I don't need to add it to my code book.' [They respond.]* (D10)

The Dutch supervisors also talked about posing a series of nested questions (i.e., questions ranging from general and easy to more specific and difficult) to build a gradual understanding on the part of the student.

> *What is the article about? The topic, methodology and main results? And what is the most striking result?*(D1)

In contrast, the Chinese supervisors talked mostly in the interviews about which questions are most important for the students to understand — questions which were not necessarily explicit or nested. With regard to the reading of research articles, for instance, a Chinese supervisor might pose the following questions.

> *Did they get any inspiration from these articles? And after reading two articles in the same area, do they see the differences between the articles?*(C3)

Perhaps because Chinese students do not ask very many questions, at least according to one of the supervisors (C8) in our study, the Chinese supervisors also

reported sometimes asking questions beforehand (i.e., as a separate, preparatory instructional step).

> *Once they choose a specific topic, I ask them to think about how to research it, to what extent the topic has been studied at both home and abroad, what questions have not been asked before.* (C4)

The Dutch supervisors talked about a wider variety of questions than the Chinese supervisors in the interviews. The Dutch supervisors often asked what, why and how questions at the same time.

> *What's the most important thing in this essay. […] Why do you need this?* (D7)

The Dutch supervisors more frequently reported asking students why they opted for a particular approach or alternative and how they planned to put that approach or alternative into practice than the Chinese supervisors.

> *They have to make their arguments for wanting to do it like this explicitly. If they don't have the arguments, then normally there is a problem.* (D4)

The Chinese supervisors spoke predominantly about what questions in the interviews.

> *What are the similarities and differences between the different authors? What do you think about them?* (C3)

Occasionally they also talked about why and how questions but relatively independent of their asking of what questions. For instance, one Chinese supervisor asked 'How can you tell the quality of literature?' (C7). Another observed:

> *For the first year master's students, I have the students read other researchers to see how they did their research, how they found the research problems.*(C8)

One exception in the Chinese sample resembled the Dutch supervisors with the use of many and also varied types of questions.

Intangible support

The Chinese supervisors talked a lot about assessment and control to ensure progress and the quality of students' work. The Dutch supervisors talked, in addition to this, about emotional support for the students.

Assessment and control. At least nine Chinese and seven Dutch supervisors talked about assessment and control or keeping the students on track. The Chinese supervisors appeared to be more focused on the use of explicit control and talked more than the Dutch supervisors about giving "approval" (C9), "inspecting' students" work (C1), and sometimes getting "very annoyed and angry" especially when the good students messed things up (C10). "If you cannot persuade me, then you must do it my way!" was also the conclusion of one supervisor when a student

repeated a mistake several times (C4). Four of the Chinese supervisors explicitly mentioned forewarning students about the consequences of student misbehaviour and particularly about the consequences of plagiarism. For the Dutch supervisors, assessment and control was largely implicit and involved more interaction and discussion with the students than for the Chinese supervisors.

> *They have to tell me why they think that this method will lead to the best results. And if they are able to say that, then I say it's okay, they can do it.* (D4)

Thesis planning or scheduling was frequently used by the Dutch supervisors for assessing and monitoring student progress. The planning was often drafted by the students and then discussed with the supervisor. The Dutch supervisors reported holding regular meetings with their students "just to make sure that they are on target" (D5). And finally, some of the Dutch supervisors reported using grading as a means to regulate student work.

> *If you want more supervision, of course you can get as much supervision [as] you like, but then the grade becomes less and less and less.* (D4)

Both the Chinese and Dutch supervisors talked about situations in which they had little or no control. One Dutch supervisor mentioned that he might send a student who has not been seen in months an e-mail asking "how is it going?" but that "it is their responsibility in the end" (D1).

Emotional support. The Chinese supervisors often mentioned understanding the difficulties and limitations of students, their insecurities at times and the need for encouragement to pursue their own ideas.

> *I understand that the first year is somehow turbulent. Students do not know where they are going. And it is all right to have such turbulence.* (C3)

The Dutch supervisors, in contrast, talked more about providing emotional support in the form of not directly pointing out too many mistakes and encouraging particularly weak students to move on. And when students are not doing well, according to one Dutch supervisor,

> *Never tell them that! Rather than tell them "oh that's all wrong", I say "Good! Just collect more on this, collect more on that, collect more on that and then you later need to try to put it together".* (D6)

The Dutch supervisors also talked about building a close relationship and creating a relaxed atmosphere in which the students are not afraid to express difficulties and expose mistakes.

> *I have had students here who would come to my office […] and I could feel that there's something wrong, […] so you give them tea and ask them how things are going and then they break down and cry. Then you try to find out what's wrong and see if you can help.* (D9)

According to two supervisors, they often meet informally "in the sun or in the coffee room" to discuss things as equals, or in the words of one supervisor "teach without teaching" (D9). According to another, "in half the cases, you become more or less friends for a very short period of time" (D1). "Some of them would like me to be there, and look over their shoulder every step of the way." (D2)

5.6 Conclusions and discussion

With regard to the intended learning outcomes identified during the interviews, the Chinese and Dutch supervisors highly resembled each other. They both considered the development of research competencies a core learning outcome (e.g., research process) for a master's thesis. However, they focused on different research competencies: The Chinese on critical disposition and academic writing skill; the Dutch on these but also on independence in doing research and developing the student's own research interests. Both the Chinese and Dutch supervisors similarly considered the development of a number of general competencies to be important learning outcomes. They strongly differed, however, with regard to the preparation of master's students for a future career: The Chinese supervisors clearly considered this an important learning outcome while the Dutch supervisors did not and even, in some cases, explicitly stated that preparation for a future career was not the aim of a master's thesis. The Dutch supervisors focused more on student well-being and their contribution to the knowledge base.

With regard to the support which the supervisors reported, the Chinese and Dutch supervisors both reported giving a combination of different types of support. They both mentioned teacher resources and student tasks as the most frequently provided forms of tangible support and adaptive supervision as the most frequently provided forms of intangible support.

However, clear differences were also found in the support reported to be provided by the Chinese and Dutch supervisors. They differed on the extent to which certain types of support were given, the ways in which they combined different types of support and — most importantly — how they used certain types of support. For intangible support (i.e., assessment and control, emotional support), the Chinese supervisors were high on explicit control while the Dutch supervisors were more implicit about this and emphasized emotional support instead. For tangible support, the Chinese and Dutch supervisors differed most strongly on their use of questions. The Dutch supervisors deliberately avoided giving students the answers to their questions by posing a nested set of questions to gradually build an understanding instead; they frequently asked students why they opted for certain ideas; and they asked students just how they planned to put their ideas into practice at times. The Chinese supervisors except for one, in contrast, did not pose many questions and reported sometimes doing this ahead of time to prepare students for the task of completing a master's thesis.

5.6.1 Master's thesis supervision and research integration into teaching

In connection to the discussion on research integration into teaching, our study provided a concrete picture of how research and teaching were actually integrated at the university. We chose master's thesis supervision to describe such a picture because it was an ideal example in which research was already well integrated into teaching. Thus by exploring the ideal integration, we could possibly identify a big variety of different ways to integrate research into teaching, which was shown in the various categories and subcategories of learning outcomes and support strategies identified this interview study.

Previous studies have repeatedly reported that, in principle, there should be a positive connection between research and teaching (Neumann, 1992; Robertson & Blackler, 2006). However, in a meta study, a near zero correlation between research quality (i.e., productivity) and teaching quality (i.e., effectiveness) was found (e.g., Hattie & Marsh, 1996). Our findings suggest that, in practice, supervisors perceived various benefits of research integration into teaching, including developing student research competencies and general competencies, pursuing value of student research, fostering students well-being, and preparing them for a future career. Moreover, these benefits not only exist in principle, but also were underpinned in forms of the tangible and intangible support provided by these supervisors, thus demonstrating how research can be integrated into actual teaching practice.

Our findings regarding the learning outcomes were not only congruent with but also complementary to previous findings that student involvement in research can, in the teachers'views, assist the development of research competence (i.e., research skills, questioning perspective, and analytical view) (e.g., Anderson et al., 2006; Healey et al., 2010; Hunter et al., 2007; van der Rijst et al., 2013), student contribution to knowledge (e.g., Anderson et al., 2006), benefits for future employment (e.g., Hunter et al., 2007). Our finding pertaining to fostering student well-being was not reported elsewhere, expanding our current knowledge about the possible value or benefits of research integration into teaching.

Our study also provided a concrete example, in which we described in detail the benefits and approaches of research integration into teaching, in a context where research is already integrated into teaching. This is different from previous studies that focused on exploring new ways to integrate research into the curricula (e.g., Healey,2005; Healey & Jenkins, 2009). At the same time, their model is very useful in understanding our findings, particularly the differences between Chinese and Dutch supervisors. For instance, the Chinese supervisors in our study focused more on assessment and control, while the Dutch supervisors focused more on discussion and posing questions. Therefore, according to their model, the Chinese and Dutch supervisors differed in the extent to which students were treated primarily as the audience (China) or as participants (the Netherlands).

5.6.2 The social-cultural roots and master's thesis supervision

Given the marked differences in the educational traditions of China and the Netherlands, it is surprising that the Chinese and the Dutch supervisors resembled each other so highly with regard to the intended core learning outcomes (i.e., research competencies) and types of support given by supervisors during master's theses. However, eight of the ten Chinese supervisors in our study had studied at or visited a Western university. Chinese education has been influenced tremendously by Western educational ideas since the 1980s (cf. Altbach, 1989; Niu, 2007). And educational ideas now travel frequently between Europe and Asia via the 'modern Silk Road' (Dang, 2013). The resemblances found here show how Western educational ideas have spread to Asian countries and, as Grigorenko (2007) has claimed, just how dominant Western educational practices have thus become throughout the world.

The observed differences in our data may stem from the educational traditions of the two countries (see Introduction to this chapter) but also from the social-economic conditions. China is a rapidly developing country with a booming economy, which requires a highly educated work force. Chinese educational policy has traditionally emphasized and still emphasizes higher education as an instrument for economic development (Hayhoe & Zha, 2006). The latter, together with the increased market demand, has resulted in a widespread expansion of enrolments in Chinese higher education since 1998 (Wang & Liu, 2011). However, unemployment caused by an oversupply of university graduates has become an issue for universities and has given rise to enhancing the employability of students as a core learning outcome for master's theses, which our data supports. The Chinese supervisors whom we interviewed clearly considered the master's thesis as a means to strengthen students' employability and thus prepare them for a future career.

In the highly developed Netherlands with its relatively stable employment market, the aims of university master's programmes have been less affected by the labour market and thus allowed the Dutch supervisors to use the master's thesis as a means to enrich both the personal and professional lives of students. In addition, the European education system, influenced by the Humboldtian tradition, concerns the development of individuals and is essentially non-utilitarian (Pritchard, 2004). This means that students — and particularly mature students who are in the middle of their careers — may still consider education a means to enrich their lives (and work) This may be difficult to sustain in the future in light of the current economic crisis in Europe and the Netherlands, however, but also in light of the influx of international students from countries like China with their own culture-specific aims for attaining a master's degree (i.e., maximize probability of employment in the home country). This was found to be the case in our data when one of the

Dutch supervisors indeed talked about the preparation of students for a future job when the students came from Asian countries.

5.6.3 Teach without teaching; answer with questions

The Dutch supervisors paid more attention to emotional support and building a close relationship with students, while the Chinese supervisors paid much more attention to control. This difference may stem at least in part from cultural differences. China is a high power-distance country (cf. Hofstede, Hofstede, & Minkov, 2010), where people expect power to be distributed unequally and accept this. In our study, Chinese students were indeed expected to have the supervisor to take the lead. In contrast, the Netherlands is a low power-distance country, where supervisors and students are assumed to be equal as individuals. And indeed in our study, the Dutch supervisors reported becoming friends with their students and reported trying to teach without giving the impression of teaching (i.e., teach without teaching).

The Chinese and the Dutch supervisors differed drastically with regard to the use of questions and the posing of a question in response to a student question — which the Dutch supervisors reported doing frequently and deliberately. These differences may have their roots in the educational philosophies of the two countries. Chinese education, under the influence of Confucius' teachings, has traditionally emphasized the emulation of seniors (Yang, 1993). Learning from examples (i.e., the teachers themselves) is thus considered an effective and essential way of learning. In contrast, Western education, under the influence of the ancient Greek philosophers, emphasizes learning via the asking and answering of questions (i.e., dialectical method) (cf. Hummel, 1994). This is perhaps why the Dutch supervisors talked more extensively about the use of questions during the supervision process than the Chinese supervisors.

Finally, the organization of the supervision in the two countries may also have created differences in the practices of the supervisors. Chinese supervisors mostly supervise groups of master's students all at once. This obviously does not allow close relationships to be built with all of the students. Group supervision also may not give supervisors the time they need to pose probing questions or questions aimed at the gradual construction of knowledge and insight. More positively, the peer support available among the students in a supervisor's group may make emotional support from the Chinese supervisor less important than it is in the Dutch situation.

Final remarks

It should be noted that we have chosen to report extensively on the differences between the Chinese and Dutch master's supervision processes. By doing this we hope to capture and explore as many different learning outcomes and supervising support as possible, and therefore expand our knowledge regarding research

integration into teaching. The observations and explanations provided here do not necessarily apply to all supervisors or teachers in the countries and should certainly not be taken as stereotypes. Our study was conducted only in the language and culture departments of universities, involving only 20 supervisors, and exceptions to the observed patterns were found in both the Chinese and Dutch samples.

Chinese and Dutch supervisors may nevertheless benefit from the cross-cultural insights provided here. Dutch supervisors might explore ways to supplement individual supervision with group supervision to draw upon the capacity of students to learn from each other, but also facilitate the often time-consuming process of individual supervision. Conversely, Chinese supervisors might consider the way in which Dutch supervisors use questions to guide the student learning process and promote independent thinking.

The present results provide insights for the functioning of supervisors within the same country as well. The differences identified for the Chinese versus Dutch supervisors , for example, may be particularly helpful when supervising students from different cultural backgrounds. Their supervisors need not necessarily adapt their guidance to the cultural backgrounds of the students, but they may become more aware of possible areas of conflict for international students in particular (e.g., hesitancy to question supervisors, hesitancy to think critically). Differences between the student's new educational context and their original educational background may then be addressed, if necessary, to promote adaptive learning for all students.

In closing, this chapter reported on the goals (i.e., intended learning outcomes) and approaches (i.e., support) to integrate research into teaching in a complete integration situation, where students were extensively involved in a complete research process. The various learning outcomes and the variety of support strategies presented in this chapter could be a practical source for university teachers to integrate research into other types of courses, with less extensive student involvement, and in parts of a research process.

Chapter 6

General conclusions and discussion

6.1 Brief overview

The aim of this dissertation was to gain insights into the role of research in university teaching in two different places in the world with different cultural and educational traditions. The role of research in university teaching refers to both the goals and the approaches for the integration of research into teaching. The participants were teachers from the language and culture departments of Chinese and Dutch universities. More specifically, two studies — using quantitative and qualitative methods, respectively — were conducted to address the central theme: The beliefs and perceptions of Chinese and Dutch university teachers regarding the role of research in university teaching, and how these beliefs and perceptions can be explained by their cultural, institutional and individual background characteristics.

Given that beliefs and perceptions are often considered as synonyms (Pajares,1992), the two notions were carefully operationalized within the context of the present studies. Teacher beliefs about the role of research in university teaching refer to what teachers believe about how research should ideally be integrated into teaching and thus the ideal role of research in teaching. Teacher perceptions of the role of research in university teaching refer to how they perceive the actual integration of research into their current teaching practices and thus the actual role of research in teaching

The survey study (Chapters 2-4) was designed to provide an overview and a better understanding of the beliefs and perceptions of teachers regarding the role of research in university teaching and how these relate to the cultural, institutional and individual background characteristics of the teachers. The focus of the survey study was on the goals of integrating research into teaching. In Chapter 2, the similarities and differences between the Chinese and Dutch university teachers were outlined in general. In Chapters 3 (the influence of institutional factors) and Chapter 4 (the influence of individual factors), more detailed results for the Dutch and Chinese teachers, respectively, were presented. To gain the general overview, no distinction was made in Chapter 2 between teachers from research universities and universities of applied sciences, while Chapter 3 did distinguish between these two groups to explore specifically the influence of institutional factors. The interview study (Chapter 5) was a case study and was designed to gain a qualitative picture on the role of research in the teaching practices of Chinese and Dutch university teachers. The interview study focused on both the goals and approaches to integrate research into teaching in a specific complete integration context (i.e., intended learning outcomes and support provided by the supervisors for completing a master's thesis).

In the following, the results of the quantitative survey study and the qualitative interview study are combined to draw general conclusions about the

integration of research into higher education teaching in two different countries. The strengths and limitations of the present studies will also be discussed. And to close, some suggestions for future research into the role of research in university teaching and the practical implications of the present findings will be outlined.

6.2 Integrated conclusions

In the three chapters presenting the quantitative results of the survey study, not only the similarities and differences between the Chinese and the Dutch teachers were presented, but also the relevance of different background factors for the role of research in higher education teaching was revealed. In the chapter presenting the qualitative results of the interview study (Chapter 5), concrete descriptions of the actual role of research in the current teaching of higher education teachers were obtained. Therefore rather partial conclusions can be gained from each chapter. A synthesis of these findings is now provided to draw a comprehensive understanding of the role research plays in university teaching, especially as similarities and differences between Chinese and Dutch teachers are concerned. Also in these chapters, the various specific conclusions have been discussed in relation to the specific research questions in these chapters. It was decided not to repeat or paraphrase those here, but instead, a selected number of the most interesting findings are elaborated upon.

General

In general, the Chinese and Dutch teachers were found to be surprisingly similar. Both groups highly valued the integration of research into teaching for student learning, and particularly valued the fostering of a critical stance on the part of students. Both groups perceived less actual integration of research into their current teaching practices, which indicates a major gap between the ideal and actual. This gap was larger for the Chinese teachers than for the Dutch teachers. A number of individual and institutional factors were found to have similarly contributed to this gap (more details to follow in section 6.2.2). When the actual practices of teachers were explored in the interview study, both the Chinese and Dutch teachers considered the mastery of a number of research competencies to be the core learning outcomes for the supervision of a master's thesis. Both groups similarly combined different types of supervisory strategies.

Despite these widespread similarities, some intriguing differences were also found with regard to certain goals and approaches in the supervision of the master's theses. The Chinese supervisors of master's theses were more explicit on the assessment and control of student process, and largely aimed at the attainment of competencies, which can better prepare the student for a future career. In contrast, the Dutch supervisors frequently mentioned providing emotional support and posing questions to students as ways to monitor student progress, and aimed

more at fostering student well-being and student interest in research. Details of these similarities and differences between Chinese and Dutch teachers are provided below.

Similarities

The Chinese and Dutch university teachers in our studies highly resembled each other with regard to not only the major gap between the ideal versus actual roles of research in teaching but also how this gap relates to various institutional and individual background factors. The teachers also resembled each other with regard to the core learning outcomes they intended their students to learn through a master's thesis, the offering of a mix of both tangible and intangible support for master's students and the inclusion of a range of teacher- and student-focused support as part of the tangible support provided for master's students.

Goals of integrating research into teaching

The ideal-actual gap. The university teachers — regardless of cultural, institutional or individual background characteristics — highly valued a role of research in teaching. They especially considered the development of creative and critical dispositions as the most important goals of integrating research into teaching (Chapters 2-4). The qualitative interview study results confirmed this point when the supervising teachers reported the fostering of a critical disposition to be one of the core learning outcomes for the supervision of master's theses (Chapter 5).

However, both groups reported low actual integration of research into their current teaching, revealing a major gap between their beliefs and the perceived actual integration research into their own teaching practices (Chapters 2-4).

Influencing factors. The observed gap between the ideal and actual role of research in teaching was found to be related to a number of institutional and individual factors. Those teachers who perceived a better actual integration of research into their teaching generally came from research-intensive institutions, spent more work time doing research, had more research training and experience and perceived a stronger research culture in their own institutions.

Regarding the relevance of the ideas about teaching in general for the teachers' beliefs about integrating research into teaching, both the Chinese and Dutch teachers were more inclined to view the goal of teaching relatively more a conceptual development of students (in contrast to information transmission). In both groups, the more strongly teachers valued the integration of research into teaching the more they were inclined to view the goal of teaching more to promote conceptual development in students.

However, while one might assume that including research in teaching contradicts an approach to teaching that focuses on transmitting information, it was then interesting to see that a conception of teaching approach which emphasizes

information transmission had no negative influence on how teachers valued the integration of research in teaching. This finding suggests that incorporating research into teaching may not necessarily clash with teaching conceptions which are oriented towards information transmission initiated by the teacher.

Research competencies. Gaining research competencies were considered a core learning outcomes for the supervision of master's theses by both the Chinese and Dutch teachers. This included learning about the entire process of conducting research (e.g., the process of choosing a research topic and framing suitable research questions, study design and data collection, data analysis, clear writing and presentation of results). In conjunction with this process, developing a critical disposition, identifying one's own research interests and developing independence in doing research were considered important.

Variety of approaches in the integration of research into teaching

The interviews with both the Chinese and Dutch master's thesis supervisors showed a variety of support strategies to be used to assist student learning about and through research. The support strategies resembled the teaching strategies used for activities other than thesis supervision (i.e., course lectures). Supervisors provided both tangible and intangible support, which could vary from teacher-focused to student-focused support. Also notable is the frequent use of teacher-focused support by teachers from both countries. This again suggests that the incorporation of research into teaching need not necessarily clash with the use of a more traditional teaching approach which is largely oriented towards the transmission of information and knowledge at mostly the initiative of the teacher.

Differences

Remarkable differences were found between the Chinese and Dutch university teachers' perceptions of the actual integration of research into their own teaching practices. Clear differences were also found between the Chinese and Dutch teachers in the ultimate intended learning outcomes; preparation for a future career (Chinese teachers) versus student well-being and knowledge contribution (Dutch teachers). For the supervision of master's theses, the Chinese and Dutch teachers differed particularly with regard to their use of certain types of support.

The actual role of research in teaching

On average, the Dutch teachers in the survey study were found to be more positive than the Chinese teachers about the actual role of research in their teaching (i.e., the integration of research into their actual teaching). This difference was still found when we analysed a sample of Chinese and Dutch teachers with similar educational backgrounds (i.e., Master), teaching non-research focused courses. This difference can also be understood in light of the Dutch teachers also being

more strongly inclined to adopt a conceptual change/student-focused approach in their teaching than the Chinese teachers, which strongly correlated with more positive perceptions of the actual integration of research into teaching (Chapter 2). A major constraint for the Chinese university teachers appears to be a mismatch between the current aim of maximizing language proficiency in China, on the one hand, and the need to prepare students for functioning in a world which requires ongoing learning and research competence, on the other hand (Chapter 4).

Learning outcomes and support
The interview findings (Chapter 5) showed the Chinese supervisors of master's theses to be strong on teacher-focused support (i.e., assessment and control), largely aimed at the attainment of measurable outcomes (i.e., student publications), and concerned with the preparation of the student for a future career. In contrast, the Dutch supervisors focused on the realization of implicit learning outcomes (i.e., knowledge contribution, student interest in research) in addition to fostering student well-being; thus their approaches were characterized by more student-focused support, such as providing emotional support and posing questions to students.

6.3 Discussion

In this section, the similarities found between the Chinese and Dutch university teachers will be discussed in relation to the ongoing Western influences on Chinese higher education. The differences between the Chinese and Dutch university teachers will be discussed in relation to not only the different educational philosophies (i.e., Confucian versus Aristotelian underlying ideologies) but also the educational aims of the language education programmes in the different countries and the social-economic conditions of the two countries. Given these insights, the findings of this dissertation will then be situated within a broader discussion of the value and benefits of integrating research into the teaching for higher education students.

6.3.1 More alike than different
It was surprising to find the Chinese and Dutch teachers to be more alike than different with regard to their beliefs, perceptions and actual practices for the integration of research into university teaching. Intuitively one would expect differences between the Chinese and Dutch teachers in light of differing cultural, historical, political and economic circumstances for the two countries. The results of the empirical investigations reported here do not endorse this view point. The results of the research reported here seem to reflect, rather, a widespread Western influence on present Chinese higher education.

One of the similarities between the Chinese and Dutch teachers was that they both highly valued the incorporation of research into higher education teaching and particularly valued the fostering of a critical stance on the part of students. This is in line with previous research findings, showing that teachers believe that there should be a strong link between research and teaching in an ideal world (e.g., Neumann, 1992; Robertson & Bond, 2001). The shared valuation of research in teaching also reflects the international drive to involve students in research in as many courses as possible and the idea that the integration of research into teaching heralds a new way of learning and teaching which can better prepare students to cope with the complexity of a knowledge society (e.g., Brew, 2003; Clark,1997; Simons & Elen, 2007). In connection with the changing way of learning and teaching, many previously non-research oriented higher education institutions in the West (i.e., polytechnics, *Fachhochschulen*, and institutes for vocational higher education) are expanding their missions to incorporate practice-oriented research into their curricula (Brew, 2001; Griffioen & de Jong, 2013; Kyvik & Skodvin, 2003). In other words, the idea of integrating research into teaching is becoming increasingly welcome among the Western higher education institutions.

The importance attached to the incorporation of research into teaching found for the Chinese teachers in the survey study presumably stems from the immense influence of Western educational ideas on Chinese higher education (cf. Grigorenko, 2007). Not only Western education models have been adopted, many university staff members and graduate students have been sent to study in the West and scholars from the West are frequently invited to visit Chinese universities (Altbach, 1989, 2009). The influence of Western educational ideas has also been boosted by international research cooperation and student exchange programmes with China (cf. Dang, 2013). Confirmation of this influence is provided in the present research by the finding that the beliefs about the role of research in teaching were found to resemble those of the Western teachers more for the Chinese teachers with study-abroad experience than for those without (Chapter 2). This Western influence is also reflected in the unexpected finding that Chinese teachers today were more inclined to a teaching approach which focus on the fostering of conceptual change in students instead of simply the transmission of knowledge, as opposed to the widespread impression of the Chinese way of teaching as characterized by rote learning and memorization.

6.3.2 Similar gap but different constraints

Though both the Chinese and Dutch teachers highly valued the idea of integrating research into their teaching, a major gap was apparent when it came to the actual integration of research into their teaching. A number of constraints were found to be related to this gap. In general, teachers' educational backgrounds (Master's versus PhD), years of research experience, and time spent doing research were

found to be influencing factors for all teachers. In the survey study, those teachers with a higher educational background, more research experience and more time spent doing research — or the characteristics of a research-intensive institution — were found to have more positive perceptions of the actual incorporation of research into their own teaching practice and thus showed less of a gap between their beliefs and perceptions.

In addition to these general constraints, the Chinese and Dutch teachers both faced other shared constraints. For the Dutch teachers from universities of applied sciences, the historical backgrounds of these institutions and the fact that universities of applied sciences have only recently become involved in research (Kyvik & Skodvin, 2003), could be expected to impede the incorporation of research into teaching. The vocation-oriented educational aims of these institutions, the relatively small amount of time allocated to research as opposed to teaching, a less established research culture within the institutions and the still limited research support provided by the institutions may all have constrained the integration of research into teaching reported by the teachers from these institutions.

Similar to the universities of applied sciences in the Netherlands, Chinese universities joined the international world of research much later than most Western institutes of higher education. The research cultures in Chinese universities are therefore relatively less developed than those in Dutch universities; and the teachers at Chinese universities generally may have less research training and less research experience than those at Dutch universities. Thus, in general, the Chinese teachers could be expected to have more difficulties incorporating research into their teaching than the Dutch teachers from the West.

The gap found for the integration of research into actual teaching for the Chinese teachers may further stem from specific characteristics of the Chinese educational traditions, the current educational system and social-economic circumstances of China.

Chinese teachers appear to be confronted with a mismatch between the traditional Chinese educational approach and the research-based teaching approach. Traditional Chinese education emphasized learning from successful example and knowing through reflection (Shim, 2008; Wong 2011). Little space is thereby left for investigation of the unknown. Chinese education was driven more towards learning about factual information under the influence of the Imperial Examination system, which emphasized memorization of the Confucius classics (Niu, 2007). Besides, in the case of language education, the memorization of grammar and vocabulary was and is still, to some extent, considered a valuable and popular way of learning in Chinese education. This means that Chinese teachers and students are accustomed to a teacher-focused approach to learning as opposed to a more student-focused approach which calls for the incorporation of research into teaching. This was indeed reflected in both the findings of the survey study and the interview study. The Chinese teachers were less concerned with teaching as

conceptual change and less student focused than the Dutch teachers (Chapter 2). The Chinese teachers were also less familiar than the Dutch teachers with asking questions to prompt student learning and more concerned with the realization of measurable learning outcomes (e.g., publications, degree attainment). The Chinese teachers were also relatively less focused on the promotion of student well-being, stimulation of research interest, encouragement of independence.

Another constraint facing the Chinese language teachers is their perceived mismatch between what research-based teaching can presumably achieve and the institutional aims of maximizing student language proficiency. The Chinese teachers in the present studies considered the promotion of a creative and critical disposition on the part of students to indeed be the primary function of integrating research into teaching (Chapter 2, Chapter 4 and Chapter 5), which is largely incongruent with the current aims in Chinese language education. University language teachers have to recognize the reality that the current language education in China functions as a means to facilitate the internationalization of the Chinese economy and is thus deeply embedded in the historical and policy circumstances of the country (cf. Shin, 2012). Historically, the exam-based filtering system has been used to select state officials (Niu, 2007), which means that the educational system in China has been traditionally used for governance (Hayhoe & Zha, 2006). Such a cultural legacy together with the current governmental efforts to develop the Chinese economy can obviously create tensions for language teachers trying to extend their language teaching aims and integrate research into their language teaching. And such an assumption is confirmed by the finding in Chapter 4 that the Chinese teachers also mentioned a fixed curriculum, lack of student motivation, and low level of student language proficiency as reasons for an inadequate integration of research into their actual teaching practice.

6.3.3 Value of research integration into teaching

In previous general literature, the integration of research into teaching was typically assumed to 1) symbolize an academic identity (e.g., Robertson & Bond, 2005), 2) enhance both research and teaching (Deem & Lucas, 2007; Neumann, 1992; Robertson & Blackler, 2006; Robertson & Bond, 2001) and 3) prepare students for the changing complex world (Brew, 2003, 2010; Clark, 1997). The results of our interview study showed the core learning outcome for the supervision of a master's thesis to be considered the development of research competencies (i.e., learning the entire research process, a critical attitude, an interest in research and a capacity for independent research) (Chapter 5). These findings are consistent with the benefits reported in the literature of the involvement of students in research in order to promote a deep level of subject learning, increased research skills, benefits for future employment (Anderson et al., 2006; Healey et al., 2010; Hunter et al., 2007), the development of a critical stance, and student motivation to do learn (Anderson et al., 2006; van der Rijst et al., 2013).

The results of the interview study also suggest that the integration of research into teaching constitutes more than just a stepping stone towards the achievement of clearly observable educational benefits. According to the teachers involved, the integration of research into teaching contributes to the less observable but equally important values of enhanced student interest in research and enhanced student well-being. The results of the interview study also show the integration of research into teaching to highlight the value of student research for the production of knowledge, which has been previously reported by Anderson et al. (2006).

6.4 Strengths and limitations

6.4.1 Strengths

This dissertation is one of the first attempts to investigate the similarities and differences between teachers from an Eastern country (China) and a Western country (the Netherlands) with regard to the integration of research into university teaching. The present comparison of these two countries with their differing cultural backgrounds, differing educational traditions and differing socio-economic circumstances thus expands our knowledge of the role of research in university teaching in general.

The studies in this dissertation also provide insights into how specific educational traditions and economic conditions can mediate the role of research in university teaching. As illustrated in Chapter 4, for example, the educational aims must be taken into account to decide whether research needs to be integrated into a particular type of course. The integration of research into teaching is shown to be spreading in Western countries, and this trend is reflected in the expansion of undergraduate education programmes to include research (Brew, 2003; Healey, 2005) and the expansion of higher education programmes for the training of teachers and other professions to include research in their teaching (cf. Kyvik & Skodvin, 2003). This idea may nevertheless be in conflict with the educational traditions and local norms, as illustrated in Chapter 4 for the context of Chinese language instruction, the traditional aim of which is to maximize student language proficiency.

The survey study reported here is also one of the first attempts to clearly distinguish between what teachers believe the role of research should be under ideal teaching circumstances and what they perceive it to be in their own actual teaching practice. The instruments used in previous research have typically measured either the beliefs of teachers about what should be the case (ideals) (e.g., Neumann, 1992) or their actual practices (e.g., Hattie & Marsh, 1996), but not both. Findings from these studies appeared to be incongruent, and revealed different aspects of the relationship between research and teaching. The instrument used in the present survey study enabled us to measure both the beliefs and practices of

teachers and thereby explore the associations between their beliefs and self-reported practices.

Yet another strength of the research reported here is its situation within a context in which both research and teaching were jointly present, especially so in the case of supervising the master's theses. In previous studies, research and teaching have mostly been probed separately. These studies focused on whether being a good researcher makes for a good teacher? Whether research productivity of teachers is positively correlated to student evaluation of their teaching? (e.g., Hattie & Marsh, 1996) Implicitly treating teaching and research as separate activities and thus separate roles for the teacher/researcher, those previous studies could not disclose information on just how teachers translate research activities and knowledge into their actual teaching. It thus seemed more appropriate to look for a connection between research and teaching in contexts where they are both clearly present and possibly integrated (cf. Clark, 1997; Wilson, Howitt, Wilson, & Roberts, 2012).

Finally, the combined survey and interview approach used in this dissertation proved particularly useful for attaining a more nuanced picture of the similarities and differences between Chinese and Dutch teachers in higher education. While the general pattern of the survey showed the two groups of teachers to both value the integration of research into teaching, the interview results revealed important additional qualitative differences between the two groups of teachers. For example, fostering a critical disposition on the part of students was shown to be a highly valued learning aim for both the Chinese and Dutch teachers in the survey research, but the interview results showed the Chinese and Dutch teachers to understand the notion of a 'critical disposition' differently (Chapter 5). The Chinese teachers understood a critical disposition as spotting similarities and differences in order to identify valuable research questions (the functional value of being critical). The Dutch teachers described a critical disposition as the adoption of a questioning perspective with active defence of one's stance on a particular topic and thus the value of being critical in and of itself.

6.4.1 Limitations

Measuring beliefs

Teacher beliefs are not easy to access (Kagan,1990) partly due to the complexity of belief systems and in part due to an inclination to provide socially desirable responses. The questionnaire used in this dissertation explicitly asked teachers to report on a conscious discrepancy between what they believe the role of research should be in teaching and their perceptions of the actual role of in their current teaching practices. In light of a potential inclination to respond in a socially desirable manner, it is possible that the teachers in our studies perceived a gap between beliefs and perceptions to be undesirable and thus reported a smaller gap

than is actually experienced. Alternatively, it might be the case that teachers exaggerated the gap in order to suggest that the integration of research into teaching is too difficult to put into their actual practice, at least for language instruction. In either case, the design of the questionnaire may have biased the ideal-actual gaps which we found.

Generalizability

This dissertation was conducted with teachers from the language and culture departments of universities. This means that the conclusions based on this particular disciplinary group may not necessarily hold for teachers in other departments of universities or other academic disciplines.

The Chinese teachers in the survey study came, moreover, from a particular part of southwest China. The present findings thus bear upon university teachers from this area and may differ for university teachers from other parts of China. The types of universities vastly differ across China, which means that the degree of research support, research culture and level of student language proficiency, for instance, may depend on the level of the university and vary greatly from area to area and institution to institution. The generalizability of the present results is thus limited in this respect. Given the use of a centralized educational system in China, however, the findings can be assumed to be generalizable to a certain extent to Chinese universities in general, and particularly to universities of the same types as those studied in the present research.

The Dutch teachers in the survey study were from a number of research universities and universities of applied sciences. The group of teachers from research universities consisted of staff members from the language and culture departments, as well as language teacher educators from university teacher education institutes. This increased the diversity of teachers' backgrounds in relation to their institutional research culture, the content and aims of their teaching. This diversity of teachers' institutional backgrounds might limit the interpretation of the results and applicability in other contexts. While drawing implications from the presented results, we should be aware of the broad variety of institutional and departmental contexts at RU and UAS in which teachers work.

Similarly, findings regarding the influence of institutional factors on the integration of research into teaching (Chapter 3) are based on a comparison of teachers from research universities to teachers from universities of applied sciences in the Netherlands. It is recommended that the present findings be generalized with utmost care to other national contexts. The boundaries between the different types of institutions in other countries may be less clear-cut than the boundaries for the binary educational system in the Netherlands and the generalizability of the present findings therefore not straightforward.

While only Chinese and Dutch teachers from the language and culture departments of universities were recruited for participation in the present studies,

there were some differences in the purpose and designs of the language programmes between the Chinese and Dutch universities. Such differences can be assumed to have consequences for the integration of research into teaching and the comparability of the programmes in general. The Chinese teachers were mostly involved in teaching *College English*, designed for improving the language proficiencies of undergraduate college students from various disciplines. The Dutch teachers, particularly those at universities of applied sciences, were mostly involved in the pre-service teacher training courses aimed at improving not only the language proficiency of the students but also their pedagogical skills as future teachers of a certain language. While there is no literature — which we know of — on how the design of a course can shape the way in which teachers integrate research into their teaching, the results reported in Chapter 4 suggested that the aims and curricular design of Chinese language education probably constrained the incorporation of research into the teaching of the language education courses. It is also therefore likely that different curricular designs might to some extent have contributed to the observed differences in the beliefs and perceptions of the Chinese and Dutch teachers with regard to the integration of research into teaching as identified in Chapter 2.

The samples in the survey study were relatively small and therefore prohibited robust statistical analysis. Our conclusions regarding the influence of individual and institutional factors are therefore mainly based on the outcomes of simple correlation analyses and the application of nonparametric statistical tests. Precise influences of certain individual and institutional factors illuminated in the survey study should therefore be further tested with larger samples.

Influencing factors

In the survey study, only a few aspects of institutional background were explored. Clear differences between the research universities and universities of applied sciences in the Netherlands were observed, but these were related only to two, potentially important, specific aspects of the institutions (i.e., research support and research culture). Other aspects of the institutions that might also be of relevance were left out, which means that our survey did unpack the institutional background only to a limited degree.

Finally, only a limited number of individual factors were addressed in the survey (e.g., beliefs about teaching, teaching experience, research experience, educational background). Other individual factors may have influenced our results as well. For instance, the way in which teachers define the nature of research in general might influence their beliefs about the integration of research into teaching and their actual integration of research into their teaching. Another individual factor which could be influential but was not considered within the context of the present research was the quality of the teacher's research training and experience. Research experience was operationalized as the number of years of engagement in

research, but we did not collect information on the quality of the teacher's research training or experience, which might also have affected the teacher's attempts to integrate research into teaching.

6.5 Implications

6.5.1 Recommendations for future research

Instruments and measurement

A first recommendation for further research into the relationship between research and teaching is to be sure to continue using instruments which can explore both, or at least explicitly differentiate between beliefs about the ideal situation and perceptions of the actual practice, as we did in the present research. Previous studies have investigated research and teaching using very different instruments (i.e., measures of research productivity versus student evaluations of teaching) and assessed only beliefs/ideals or actual practice but not both. In such a manner, seemingly different conclusions regarding the associations of research and teaching have been reached and the actual incorporation of research into higher education teaching has remained largely unexamined. Future investigations exploring *both* teacher beliefs and practices with regard to the research-teaching nexus could contribute to a further understanding of the ambiguous relationship between research and teaching in higher education.

Identify additional influencing factors

In the present research, a significant gap was found between teacher beliefs about and their perceived actual practices for the integration of research into teaching. This gap was partly explained by a selected number of institutional and individual factors. The number of factors examined was nevertheless limited, which means that other relevant aspects of institutional background and other individual characteristics need to be identified.

To start with, the type of institution (i.e., research- versus teaching-oriented) was found to be a critical institutional factor but very little is known about which specific characteristics of the institutions foster (or impede) the integration of research into teaching. This dissertation explored the perceived research culture, perceived research support provided and the work time allocated for doing research within the institution. These were found to be insufficiently developed in the universities of applied sciences in the Netherlands. Enhancing these can be expected to facilitate the integration of research into teaching. But how exactly the research cultures and research support in institutions can be enhanced awaits further specification in future research.

Individual factors such as the teacher's research training (i.e., Master's versus PhD) and the number of years of research experience also appeared to be

important factors for the integration of research into higher education teaching in the Dutch context, but less so in the Chinese context. This suggests that not only the quantity but also the quality of the research training and experiences of teachers should be considered in the future. Investigation of the way in which teachers conceptualize the nature of research and the way in which this affects their integration of research into their teaching is another individual factor to be examined in future research. Given such information, the preparation of teachers can be adjusted to maximally prepare them for the task of integrating research into the teaching of students and thereby the preparation of students for optimal functioning in the complex and ever-changing world of the future.

In Chapter 4, the Chinese teachers pointed to limited language proficiency and limited student motivation as constraining factors for the actual integration of research into their teaching. This suggests that student factors should also be examined in future research on the integration of research into university teaching. Also in Chapter 4, the study-abroad experiences for just a couple of months were not found to be significantly associated with teacher perceptions of their actual incorporation of research into their teaching, suggesting a need to further investigate the influence of study-abroad experiences. Is the local situation too dominant to be influenced or the length of study abroad experience too short to exert any observable effects with regard to the actual integration of research into teaching?

6.5.2 Practical implications

Implications and recommendations for institutions

In the case of Dutch research universities and research-intensive institutions internationally, there is a group of teachers, perhaps typical for language departments, who had little time for research and had limited research experience and research training. For instance, this group may include language teacher educators and instructors aimed at language proficiency of students. As shown in Chapter 3, some 50% of the teachers at Dutch research universities had a master's degree and spent no more than 10% of their work time on research; some 34% had less than three years of research experience. Thus for this particular group of teachers, three suggestions can be followed to bridge the gap between the ideal and the actual for the integration of research into teaching: 1) Allocate more work time for conducting research in addition to teaching; 2) Increase the amount of research experience and 3) Enhance research training, through PhD programs for staff for instance. While these suggestions seem obvious there have apparently been circumstances in the institutional context in the past which created the present situation. It seems to be a matter of choice: If the university considers the integration of research into teaching to be of relevance for *all* teachers, the suggestions just mentioned seem to be necessary.

In the case of Dutch universities of applied sciences and other vocation-oriented institutes of higher education, it is certainly worthwhile that the relevance of the idea of integrating research into teaching to be evaluated along with the feasibility of doing this in light of the specific conditions and aims of the institution. The following might be considered for compatibility, for example: the vocation-oriented educational aims of the institution and the learning outcomes which research-led teaching can be expected to achieve. Depending on the outcomes of such careful evaluation, the institute may decide to focus their educational policy on teaching only. But if it is decided to integrate research into teaching as part of the institute's educational policy, then serious efforts are needed to organize this properly and provide the support and structure needed for such an endeavour. The establishment and promotion of a supportive research climate with sufficient institutional support and stimulating research culture requires a major investment in time and money for institutions which are not by definition research intensive, as these aspects of the institution have been rather neglected. Communities of researchers may be created to support the national and international exchange of knowledge and thus research networks be established both inside and outside institutes of higher education. Major efforts should also be expanded to increase the educational backgrounds, amount of research experience and work time allocated to research at these institutions as these were found to be constraining factors for the integration of research into teaching in the studies reported on here. They are thus critical for closing the ideal-actual gap in the inclusion of research in higher education teaching.

For the Chinese universities in particular and other Asian institutes of higher education, it is recommended to be very aware of the consequences and implications when trying to apply the Western educational ideas in Chinese and other Asian contexts. Conflicts can arise when differing traditions meet and local norms are expected to adapt, which therefore need to be aligned. In the case of integrating research into language teaching in China, for example, the rationale for such integration should be given very careful attention to start with. It is very well possible that different types of courses should be differentiated in the future for the use of research as part of teaching. This differentiation may depend on educational aims, educational content, educational or teaching level and level of student proficiency — among other things. Language teachers in Chinese universities should also be given more room than is currently the case to decide on the level of research integration into their own teaching. This will require greater flexibility in the current language curricula. When considering the integration of research into teaching and the rationale for doing this or not doing this, moreover, the institutions should encourage the teachers to explore themselves whether and how the inclusion of research in their teaching might lead to new ways of teaching, learning and improving the abilities of students. If it is decided in the end to indeed integrate research into a particular type of course, then the teachers' efforts should

be structurally recognized and supported but also evaluated with respect to the purpose of doing this.

Implications and recommendations for teachers

In the survey study reported on here, a teaching orientation which aims at promoting conceptual development of students was positively associated with how teachers value integrating research into higher education teaching. For this reason, it is recommended that dialogue among teachers with regard to their beliefs about teaching in general be stimulated, particularly when there is a desire to stimulate the integration of research into teaching. It was also found in the survey study reported here that a teacher-focused approach to instruction does not in itself preclude positive attitudes towards or efforts to integrate research into teaching in higher education. Similarly, the findings from the interview study showed both the Chinese and Dutch supervisors of master's theses to provide a combination of support, which ranged from more teacher-focused to more student-focused support. It thus appears that teachers seek a balance between teacher- and student-focus of their instruction and therefore their efforts to integrate research into their teaching presumably as well. It is therefore recommended that teachers occasionally be given an opportunity to reflect on this balance and consider how their current teaching practice stands in relation to their ideals and educational aims. This means that teachers be given opportunities to meet and share their knowledge about research in general and their experiences with the integration of research into their teaching practices. Such dialogue may not only reduce insecurities with regard to conducting research and integration of research into their teaching but also better inform their decisions with regard to specific goals and approaches to the integration of research into their teaching practices.

In the interview study reported here, the Chinese supervisors of master's theses were found to strongly focus on measurable learning outcomes (i.e., degree attainment, assessment of student knowledge and skills). This focus has its roots in the Chinese education system and the current economic circumstances of China, which means that it may continue to be the focus of master's these supervision in the near future in China. It can nevertheless be recommended under such circumstances that teachers be encouraged to pay greater attention to intangible learning outcomes (e.g., identifying student research interest, student contribution to the knowledge, fostering student well-being) in addition to tangible learning outcomes. Some of the Chinese supervisors in the interview study indeed observed that students were strongly externally motivated to enter the master's programme, and see the thesis as merely a mandatory obligation for getting the master's degree, but do not understand the broader purposes of completing a thesis. Therefore greater attention is needed to raise student awareness of the broader value of completing a thesis. To do this, teachers may consider to pay more attention to intangible learning outcomes such as the identification of students' own interest,

the fostering of their well-being and student contribution to the knowledge in a certain field.

It is also recommend that Chinese teachers be encouraged to stimulate students to ask and discuss more questions. One way of doing this is for the teachers to pose more questions themselves and establish a secure teaching/supervision environment for considering the questions. Students must feel free to express their thoughts and opinions but also talk about any difficulties they have experienced and mistakes which have been made in order to learn from these. The way in which the Dutch teachers posed questions and structured the learning environment to promote the attainment of intangible learning outcomes (Chapter 5) provides a practical resource for how to best do this. Increased questioning and discussion as part of the teaching process, and especially the research supervision process, can also foster more in-depth learning. In response to student inquiries, for example, supervisors may also consider asking students to come up with their own ideas and alternative explanations in addition to responding on the basis of their own experience and expertise as teacher or supervisor. In such a manner, students are induced to think about things further and actively argue their ideas with more solid, in-depth learning as a result.

Teachers in the Netherlands and other Western teachers alike can benefit from gaining insights into and understanding the practices of Chinese teachers. The use of group supervision is common in China, for example, and occasionally used in Western educational settings where it can save time — provided it is well organized — and also create room for student peer support. One reason that the Chinese supervisors in general provided less emotional support for students is perhaps related to their use of group supervision, which possibly entails emotional support among peer students. One of the Dutch supervisors in the interview study reported organising group meetings for students from the same department to come together for peer sharing purposes on a monthly basis, with a supervisor present as well. Towards the end of the master's trajectories of these students, they then took the initiative to organize a conference to share the outcomes of their master's theses with their peers and supervisors in the department.

Moreover, the interview study described not only a wide range of possible learning outcomes and support strategies for the supervision of master's theses, but also a rich set of goals and approaches for integrating research into other types of university teaching. Therefore it provides available options to teachers for their integration of research into different types of university teaching, in which students may be less involved or only in parts of a research process. How exactly teachers may choose from these options is beyond the scope of this dissertation.

Final comments

In closing, the similarities and differences observed for the Chinese and Dutch teachers and supervisors in the present research can help them understand their

international students. Teachers are being asked to supervise a growing number of Chinese students at Western universities in particular. These supervisors need not completely adapt their supervision to the specific cultural backgrounds of their students, but awareness and knowledge of these similarities and differences can nevertheless assist them with the accurate assessment of students, identification of student difficulties, help with student difficulties and — in the end — promotion of student learning. A mismatch can often occur, for instance, in the expected Western way of learning and the approach of the Chinese student to the learning task. A student from China will usually expect the teacher to give explicit guidance and concrete examples to learn from, while the Western supervisor expects the students to take the initiative, justify their ideas and engage in active discussion with the supervisor. This mismatch can obviously create problems when it is not recognized and amended. The results of our interview study can thus enhance awareness of the similarities and differences in both the explicit and implicit expectations of not only supervisors but also students and thus enable them to address these differences and adapt their learning and supervision as necessary to promote optimal teaching, learning and research.

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Summary

This dissertation reports on the beliefs and perceptions of Chinese and Dutch university teachers regarding the role of research in university teaching and how these beliefs and perceptions can be explained by their cultural, institutional and individual background characteristics. Different aspects of their beliefs and perceptions were explored via a survey study and an in-depth interview study. For purposes of this research, teachers' beliefs about the role of research in university teaching were defined as what teachers believe that research should ideally be integrated into teaching and thus the ideal role of research in teaching. Teachers' perceptions of the role of research in university teaching were defined as how teachers perceive the actual integration of research into their current teaching practices and thus the actual role of research in teaching.

General introduction

In answering the call in international literature to engage as many students in research as possible, various programmes and projects have blossomed for different types of higher education across the globe. It can be assumed that the idea of more engagement of undergraduate students in research will soon spread to Asian countries as well, including China. This means that university teachers from both the East and the West will be facing a similar challenge of embedding research in the higher education of students and have to contemplate the role of research in their own ongoing teaching activities. The attempts of university teachers to do this, so far, have been greatly hindered by a number of factors including the organization and management of research and teaching, the existing beliefs and practices of teachers regarding research and teaching, diversity of student populations, widely differing educational traditions and social-cultural norms — particularly in Asian and other non-Western countries. Greater insight into these barriers and just how teachers can deal with them is thus needed to promote a stronger link between research and teaching in higher education.

In the second part of this chapter, the role of research in teaching is defined on the basis of what has been reported in the existing literature on the research-teaching nexus, undergraduate research and inquiry-based learning. In doing this, the role of research in higher education teaching was defined as the goals and approaches for the integration of research into teaching, which can vary from partial integration (i.e., little student involvement in parts of the research process) to complete integration (i.e., extensive student involvement in a complete research project). A brief review was provided regarding the research literature concerned

with the relationship between research and teaching (i.e., the correlations between the two but also the integration of the two), the Eastern and Western educational traditions, the increasing Western influence on Asian higher education, the relevance of teacher beliefs about teaching and the relevance of the institutional context for understanding the successful or less successful integration of research into higher education.

The final section of Chapter 1 presents an outline of the survey and interview studies composing this dissertation. The survey study (reported across Chapters 2-4) was designed gain a general overview of the beliefs regarding the role research should play in their teaching and their perceptions of the role research actually plays in their teaching of Chinese and Dutch university teachers. The contributing factors to those beliefs and perceptions were investigated: Chapter 2 on the cultural factors, Chapter 3 on the institutional factors and Chapter 4 on individual factors. The interview study (Chapter 5) was designed to describe a concrete picture of the actual practices of Chinese and Dutch university teachers in relation to the role of research in teaching, for which an example of complete integration of research in teaching was chosen, namely the supervision of the master's thesis. This is because the supervision of the master's thesis can serve as natural locales of a tight blending of research activities, teaching activities and student learning.

The survey study

The core of the questionnaire administered in the survey study consisted of seven scales addressing the goals of integrating research into teaching. In doing this, both teachers' beliefs about the ideal role of research in teaching and teachers' perceptions of the actual role of research in their own teaching were inquired about. The seven scales were, thus: 1) developing a creative disposition; 2) developing a critical disposition; 3) fostering student research interest; 4) enhancing research skills; 5) prompting student reflection on research; 6) familiarising students with current research; and 7) encouraging student participation in research. The same questions were posed with regard to the teachers' ideal and actual teaching situations.

The questionnaire also included items addressing the individual backgrounds of the teachers (like gender, age, educational background, institutional background, years of research experience, years of teaching experience and time spent doing research) and items addressing the institutional backgrounds of the teachers (i.e., research support and research culture). Yet another section of the questionnaire addressed the teachers' beliefs about teaching in general. The two scales for this section were: teaching as information transmission/teacher-focused and teaching as conceptual change/student-focused.

Cultural factors

In **Chapter 2**, the beliefs about the ideal role of research in teaching versus perceptions of the actual role of research in teaching are compared for Chinese (n = 152) and Dutch (n = 132) university teachers. The focus of this chapter is on the influence of a cultural related factor (i.e. teacher beliefs about teaching). A number of relevant individual factors are also examined: years of research experience, years of teaching experience, educational background, study abroad experience and the type of course being taught. The countries of China and the Netherlands were compared because of their distinctive teaching philosophies related to their different cultural histories. Specific research questions addressed in Chapter 2 are:

- What are Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching?
- What are Chinese and Dutch university teachers' perceptions of the actual role of research in their teaching practice?
- How do Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching correspond to their beliefs about teaching in general?
- How do Chinese and Dutch university teachers' beliefs about and perceptions of the role of research in their teaching relate to their backgrounds?

It appeared that the Chinese and Dutch teachers both highly valued the idea of including research in their teaching, but also both reported significantly lower scores for the actual incorporation of research into their teaching practices. Both groups viewed the development of a creative and critical disposition on the part of students as most important and student participation in research as least important goal of integrating research into their teaching.

However, the Dutch teachers attributed a significantly more important role to research in teaching than the Chinese teachers for both the ideal and actual teaching situations. This difference was still found in a sample of Chinese and Dutch teachers with similar educational backgrounds (Master's), teaching non-research focused courses.

It was also found that the more years of research experience teachers had the more strongly they valued a role research should play in teaching, particularly so for the Dutch teachers. The years of teaching experience did not have any observable influence in this regard.

With regard to teacher beliefs about teaching in general, both the Chinese and Dutch teachers were found to show a preference for the goal of teaching to be related to students' conceptual development rather than information transmission. The Dutch teachers were more strongly inclined to view the goal of teaching more a conceptual development of students than the Chinese teachers. The Dutch

teachers also disagreed more strongly with a goal of teaching to be transmitting knowledge to students than the Chinese teachers.

Finally, this chapter reported on how teacher beliefs about teaching in general influenced the way teachers valued the role of research in teaching. The more strongly teachers viewed the goal of teaching to be the conceptual development of students, the more highly they valued a role of research should be in their teaching. This trend was found for both the Chinese and Dutch teachers, but stronger tendency for the Chinese teachers. Interestingly, a more knowledge transmission orientation to teaching did not prevent the teachers to highly value the role of research in teaching.

Institutional factors

Chapter 3 reports on the beliefs versus perceptions of the Dutch university teachers (n = 132) with respect to the role of research in teaching. It addresses how the institutional background (i.e., research-intensive versus teaching-intensive institutions, research support and research culture) relates to the beliefs and perceptions of the teachers with regard to the role of research in university teaching. And finally, three individual factors are considered as well: educational background, years of research experience and time spent doing research. A comparison of teachers at Dutch research universities (RU) and universities of applied sciences (UAS) was opted for because these institutions could be assumed to differ sufficiently from each other — given the basically binary Dutch higher education system. The following research questions are addressed in Chapter 3.

- What do teachers at research universities and universities of applied sciences believe about the ideal role of research in university teaching?
- How do teachers at research universities and universities of applied sciences perceive the actual role of research in their teaching practice?
- How do the perceptions of university teachers regarding the actual role of research in teaching relate to their institutional and individual backgrounds?

The similarities and differences between the Dutch and Chinese teachers in Chapter 2 were also found in the comparison of the RU and the UAS teachers. The teachers at the RU and the UAS were found to resemble each other in several aspects. First, both groups highly valued a role of research in university teaching in principle (i.e., under ideal circumstances), and reported a low level of the actual integration of research into their current teaching. Second, both groups considered the development of a creative disposition and critical disposition on the part of students to be the most important goals of integrating research into teaching. Third, both groups believed and perceived student participation in research to be the least important goal of integrating research into teaching.

Despite these major similarities, the RU teachers reported significantly higher scores on their perceptions of the actual role of research in teaching than the UAS teachers. The gap between the RU teachers' beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their current teaching was also therefore significantly smaller than that for the UAS teachers.

To explain the observed differences between the two groups of teachers, the relevance of their individual and institutional backgrounds were investigated. In addition to more research experience, as already noted in Chapter 2, a higher educational background (PhD versus Master's) and more work time spent doing research were associated with more positive perceptions of the actual incorporation of research into their teaching. These three factors were all characteristics of the RU teachers. Although the two groups of teachers showed similar perceptions of institutional research support, the RU teachers perceived a stronger research culture than the UAS teachers. Taken together with the finding that the RU teachers had more positive perceptions of the integration of research into their actual teaching than the UAS teachers, these findings indicate that institutional characteristics play a critical role in the actual integration of research into university teaching. This conclusion is further confirmed by the finding that both research support and research culture correlated with the UAS teachers' perceptions of just how well they could integrate research into their actual teaching — the greater the perceived research support and more positive the perceived research culture, the more successful they were at integrating research into their teaching practices.

Individual factors

Chapter 4 focuses on the relevance of individual factors for the teachers' beliefs about and perceptions of integrating research into teaching. Individual factors considered are the time spent doing research, research experience, learner type and experience of study abroad. In addition, this chapter also reports on a specific institutional background factor (i.e., research intensive versus non-research intensive institutions) and the teachers' self-reported constraining factors in particular. The Chinese subset of the survey data (n = 152) was explored in order to fill the gap in the existing literature, in which the integration of research into teaching in an Asian higher educational context was still underexplored. Another aim was to determine if the Asian educational context (i.e., different educational system, educational traditions and educational aims) mediated the adoption of the largely Western idea of integrating research into higher education teaching. The following two research questions were addressed in Chapter 4.

- How do teachers' beliefs about the ideal role of research in teaching relate to their perceptions of the actual role of research in their teaching practice?

- How do teacher background variables relate to their perceptions of the actual role of research in their teaching practice?

As already reported in Chapter 2, a significant gap was detected between the Chinese teachers' beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their own teaching practices.

To understand better this gap experienced by the Chinese teachers, similar to findings reported in Chapter 3, it was found the teachers who perceived greater actual integration of research into their ongoing teaching practice to come more frequently from research-intensive universities, to have relatively more years of research experience and to spend more of their work time doing research.

Two other background factors were also explored in this chapter. The type of learner being taught by the Chinese teachers (i.e., language versus non-language majors) and teacher experience with studying abroad did not relate to their perceptions of how they had managed to integrate research into their actual teaching.

Noticeable in this chapter is that the Chinese teachers themselves mentioned a couple of additional factors as contributors to the observed ideal-actual gap. Among these were institutional factors such as lack of time, heavy teaching loads and fixed curricula. Lack of student motivation and insufficient student English proficiency were also mentioned. And lack of teacher motivation together with a low status for language instruction within the institution were mentioned as well.

The interview study: Master's thesis supervision

The results of the survey study provided a general overview of what teachers think about the role of research in university teaching. The results of the interview study presented in **Chapter 5** provide a more qualitative, detailed picture of the actual role of research in university teaching. The context of master's thesis supervision was chosen for the interview study for the following reasons. First, the master's thesis programmes and supervision were comparatively more established than other research programmes and supervision (e.g., undergraduate research projects, research method courses) in most of the participating institutions. Second, master's thesis supervision can entail a wide variety of goals and alternative approaches to the integration of research into teaching. And third, the context of master's thesis supervision with its focus on research could limit — in the context of this study — the influence of various constraints on the integration of research into actual teaching practice. A total of ten Chinese and ten Dutch supervising teachers from the language and culture departments of research intensive universities were interviewed. The following research questions were addressed.

- What learning outcomes do Chinese and Dutch supervising teachers want their master's students to achieve through a master's thesis?
- How do Chinese and Dutch supervising teachers support their master's students to achieve these learning outcomes?

With regard to the learning outcomes which the supervisors wanted their master's students to achieve, five core categories emerged from the data: research competencies, general competencies, value of student research, student well-being and preparation for a future career. The Chinese and Dutch supervisors highly resembled each other with regard to which learning outcomes they considered most important: Both considered the development of research competencies on the part of students to be most important for a master's thesis, although the Chinese supervisors focused on stimulating a critical disposition and academic writing as part of this, while the Dutch supervisors focused on stimulating a critical disposition, academic writing, as well as independence in doing research and student interests in research. The Chinese supervisors also aimed to develop the general competencies of students and particularly their language abilities, to prepare them for their future profession and to encourage publication as way to demonstrate the quality of the student research. In contrast, the Dutch supervisors talked more often about student contribution to the knowledge base and assuring student well-being. The Chinese and Dutch supervisors differed most strongly with regard to an intention to prepare students for a future career. The Dutch supervisors only mentioned the relevance of the master's thesis for the student's further personal and professional development and some even explicitly stated that preparation for a future career was *not* the aim of a master's thesis, while all ten Chinese supervisors showed considerable concern to prepare students for a future career.

With regard to the second research question, pertaining to the support provided by supervisors, two major categories emerged from the interview data: tangible and intangible support. Tangible support refers to supervising which deals directly with content and to supervising activities which can be observed. Six subcategories of tangible support could be further distinguished and appeared to range from teacher-focused to student-focused activities (i.e., providing teacher resources, lecture and tell, teacher modelling, discussion, posing questions and giving student tasks). Intangible support involved supervision not directly concerned with explicit content or activities. Four subcategories of intangible support emerged from the data: adaptive supervision; assessment and control; emotional support; and teacher dedication.

The interview results showed the Chinese and Dutch supervisors to both use a variety of support types. They both mentioned supplying or referring students to study resources and giving students tasks to complete as the most frequent type

of tangible support provided and adaptive supervision as the most frequently provided type of intangible support.

Clear differences also manifested themselves in the support practices of the Chinese versus Dutch supervisors. The two groups differed on the extent of using the different types of support, the ways in which they combined the different types of support and — most importantly — the way in which specific types of support were used by them. For the two types of intangible support (i.e., assessment and control, emotional support), the Chinese supervisors reported high use of explicit assessment and control while the Dutch supervisors reported higher use of implicit control and an emphasis on emotional support. For tangible support, the Chinese and Dutch supervisors differed most strongly on the use of questions. The Dutch supervisors deliberately avoided directly giving answers to students' questions and opted to pose a series of nested questions to gradually build the students' understanding instead; the Dutch supervisors also reported frequently asking students to justify their ideas and explain how they planned to put them into practice. The Chinese supervisors, except for one, did not pose as many questions as the Dutch supervisors and reported sometimes doing this ahead of time as a prescription to prepare students for the task of completing a master's thesis.

General conclusions and discussion

In **Chapter 6**, the results of the survey and interview studies are integrated to draw some general conclusions about the incorporation of research into teaching in Chinese and Dutch higher education. After a brief overview of the design of the different studies, the main findings of the survey research and the interview research are summarized with respect to the similarities and differences between the Chinese and Dutch university teachers with regard to their beliefs about the ideal integration of research into higher education teaching and their perceptions of the actual integration of research into such teaching.

The Chinese and Dutch teachers in studies of this dissertation were found to be more alike than different. Both groups highly valued a role research should play in the teaching of higher education students. Both groups showed a major gap between the ideal versus actual role of research in their teaching. And both groups were more inclined to approach teaching as conceptual change and student focused rather than as strictly knowledge transfer and teacher focused. Similar contributing and constraining factors were also found to explain the ideal-actual gap for the two groups. The factors pertained to the institutional backgrounds of the teachers (i.e., research- versus teaching-oriented institutions) and the individual backgrounds of the teachers (e.g., their educational backgrounds, research experience).

The Chinese and Dutch teachers further resembled each other with regard to what they considered core learning outcomes for the supervision of a master's thesis (i.e., the mastery of such research competencies as academic writing skills,

understanding the entire research process, development of a critical disposition and independent research). The two groups of teachers also both combined tangible support (i.e., teacher resources, lecture and tell, teacher modelling, discussion, posing questions and assignment of student tasks) with intangible support (i.e., adaptive supervision, assessment and control, emotional support and teacher dedication). A range of teacher-focused support to student-focused support was also found to characterize the tangible support provided by both the Chinese and Dutch supervisors.

Despite these widespread similarities, remarkable differences were also found between the Chinese and Dutch university teachers. On average, the Dutch teachers in the survey were found to be more positive about the actual integration of research into their own teaching than the Chinese teachers (Chapter 2). The Dutch teachers were also more strongly inclined to adopt a conceptual change/student-focused approach to teaching than the Chinese teachers, and such an orientation was found to be strongly positively associated with the teachers' perceptions of the actual role of research in their own teaching (Chapter 2). There were also clear differences between the Chinese and Dutch teachers with regard to the ultimate learning outcomes intended for their students: preparation for a future career (China), student well-being (the Netherlands) and knowledge contribution (the Netherlands). The Chinese and Dutch supervisors differed most on specific types of support (Chinese: assessment and control; Dutch: emotional support and the posing of questions).

Particularly the similarities between the Chinese and Dutch teachers can be understood in relation to the growing influence of Western higher education on Asian higher education. Many constraining factors were also found to explain the ideal-actual gap observed for the integration of research into higher education by both the Chinese and Dutch teachers. Among the constraining factors were cultural, institutional and individual background characteristics of the teachers. Though both groups experienced a similar gap, Chinese and Dutch teachers faced different constraints. A lack of supportive research climate was the main constraining factor for the UAS teachers in the Netherlands, while Chinese teachers faced a mismatch between what research-based teaching can presumably achieve and the aims of maximizing student language proficiency in current Chinese language education.

The strengths and limitations of the research reported on this dissertation are considered in closing. Three major recommendations are then made on the basis of this information. First, future research into the relationship between research and teaching should use instruments, as how it was done in the present studies, which allow exploration of both beliefs and actual practices but independent of each other and therefore for comparison purposes. Second, managers, policy makers and university teachers need to be made aware of the major gap which exists between what teachers believe about the integration of research into teaching and their actual practices with regard to this. Institutions

need to identify and address the cultural, institutional and individual background factors contributing to and constraining the integration of research into teaching at their institution. The different stakeholders in the integration of research into higher education teaching should be encouraged to enter into a dialogue with each other to address the ideal-actual gap and thus the factors constraining the integration of research into higher education teaching. Finally, it is recommended that the similarities and differences found between the Chinese and Dutch supervisors of master's theses be taken into consideration by supervisors to help them with the education of international students coming from different cultural backgrounds and Western supervisors of Chinese students in particular. Supervisors need not, by definition, adapt their actual supervision to the specific cultural backgrounds of their students, but knowledge of these general similarities and differences can certainly help them to identify student strengths and difficulties, clarify latent expectations, and to promote maximal student learning in the end.

Nederlandse samenvatting

Dit proefschrift richt zich op de opvattingen en percepties van Chinese en Nederlandse docenten over de rol van onderzoek in het hoger onderwijs. De overeenkomsten en verschillen worden beschreven en verklaard vanuit culturele, institutionele en individuele achtergrondkenmerken van de docenten. Verschillende aspecten van hun opvattingen en percepties werden verkend via een vragenlijststudie en een interviewstudie. Ten behoeve van dit onderzoek werden de opvattingen van docenten over de rol van onderzoek in het hoger onderwijs gedefinieerd als wat docenten vinden over de ideale rol van onderzoek in het onderwijs. De perceptie van docenten over de rol van onderzoek in hoger onderwijs werd gedefinieerd als de manier waarop docenten de integratie van onderzoek ervaren in hun huidige onderwijspraktijk; de ervaren rol van onderzoek in het onderwijs.

Algemene introductie

Internationaal wordt meer en meer nadruk gelegd op het stimuleren van studenten tot participatie in onderzoeksactiviteiten in het hoger onderwijs. Deze trend is ook herkenbaar in de opkomst van verschillende onderwijsinitiatieven waarin studenten in meerdere of mindere mate betrokken worden in onderzoek. Verondersteld kan worden dat het besef dat onderzoeksintegratie en de betrokkenheid van studenten in onderzoek positieve effecten heeft op het leren van studenten, weldra ook in Aziatische landen, waaronder China, zal postvatten. Dit betekent dat docenten uit zowel Oost als West te maken krijgen met gelijksoortige uitdagingen als het gaat om inbedding van onderzoek in hun onderwijs en dat docenten zullen moeten nadenken over de rol van onderzoek in hun eigen onderwijsactiviteiten. Uit de literatuur blijkt dat de pogingen van universitaire docenten aanzienlijk belemmerd worden door een aantal factoren, waaronder de organisatie van onderzoek en onderwijs, de bestaande overtuigingen en praktijken van docenten zelf ten aanzien van het onderzoek en onderwijs, diversiteit van de studentenpopulatie, uiteenlopende onderwijstradities en sociaal-culturele normen. Dit laatste geldt met name in Aziatische en andere niet-Westerse landen. Meer inzicht in de belemmeringen en manieren waarop docenten hiermee om kunnen gaan is nodig om in internationaal perspectief een sterkere band tussen onderzoek en onderwijs te versterken in het hoger onderwijs.

Op basis van de bestaande literatuur over de verwevenheid van onderzoek en onderwijs wordt de rol van onderzoek in het onderwijs gedefinieerd als de doelen en de aanpakken voor de integratie van onderzoek in het onderwijs. Deze

onderzoeksintegratie in onderwijs kan variëren van partiële integratie (weinig studentbetrokkenheid bij onderdelen van het onderzoeksproces) tot volledige integratie (uitgebreide studentbetrokkenheid in complete onderzoeksprojecten). De onderzoeksliteratuur over de relatie tussen onderzoek en onderwijs werd op de volgende aspecten bestudeerd: de Oosterse en Westerse onderwijstradities, de toenemende Westerse invloed op Aziatische hoger onderwijs, de relevantie van de opvattingen van docenten en de relevantie van de institutionele context voor het begrijpen van het succesvolle of minder geslaagde integratie van onderzoek in het hoger onderwijs.

Hoofdstuk 1 geeft tevens een overzicht van de studies in dit proefschrift. De vragenlijststudie (gerapporteerd in de hoofdstukken 2, 3 en 4) werd onder andere opgezet om een algemeen overzicht te krijgen van de opvattingen en percepties van docenten over de rol van onderzoek in het onderwijs. Tevens werden de factoren die bijdragen aan die opvattingen en percepties onderzocht, waaronder culturele factoren (Hoofdstuk 2), institutionele factoren (Hoofdstuk 3) en individuele factoren (Hoofdstuk 4). De interviewstudie (Hoofdstuk 5) werd opgezet om inzicht te krijgen in de rol van onderzoek in de actuele onderwijspraktijk van Chinese en Nederlandse docenten. Als voorbeeld van volledige integratie van onderzoek in onderwijs werd de begeleiding van masterscripties gekozen. Voor deze onderwijsvorm werd onder andere gekozen, omdat de begeleiding van masterscripties een authentieke onderwijspraktijk is waarin sprake is van een duidelijke combinatie van onderzoeksactiviteiten en onderwijsactiviteiten ter bevordering van het leren van studenten.

Vragenlijststudie

De kern van de vragenlijst bestond uit zeven schalen over de doelen van het integreren van onderzoek in het onderwijs. In de vragenlijst werd zowel gevraagd naar de opvattingen van docenten over de ideale rol van onderzoek als naar de perceptie van de ervaren rol van onderzoek in het eigen onderwijs. De zeven schalen waren: 1) ontwikkeling van een creatieve houding, 2) ontwikkeling van een kritische houding, 3) motiveren van studenten voor onderzoek, 4) bevordering van onderzoeksvaardigheden, 5) stimuleren van reflectie op onderzoek, 6) studenten vertrouwd maken met actueel onderzoek, en 7) bevordering van participatie van studenten in onderzoek. Dezelfde vragenlijstitems werden aan docenten voorgelegd voor de ideale alsook voor de ervaren onderwijssituaties. In de vragenlijst werden ook items opgenomen waarin de achtergrondkenmerken van de docenten werden bevraagd, zoals geslacht, leeftijd, opleidingsniveau, institutionele achtergrond, onderzoekservaring, onderwijservaring en tijdsbesteding in onderzoek. Tevens werden aan de docenten stellingen voorgelegd over de institutionele context, specifiek over de onderzoeksondersteuning en de onderzoekscultuur. Een ander deel van de vragenlijst bevroeg de docenten over hun onderwijsopvattingen in het

algemeen, waarin gebruik gemaakt werd van een dimensie lopend van onderwijs gericht op informatieoverdracht door docenten tot onderwijs gericht op conceptuele verandering bij studenten.

Culturele factoren

In **hoofdstuk 2** worden de meningen over de ideale rol van onderzoek in het onderwijs versus de perceptie van de werkelijke rol van onderzoek in het onderwijs beschreven voor Chinese (n = 152) en Nederlandse (n = 132) docenten. Dit hoofdstuk richt zich op de invloed van cultureel gerelateerde factoren op de opvattingen van docenten over de rol van onderzoek in het onderwijs. De landen China en Nederland werden vergeleken vanwege hun verschillende onderwijsfilosofieën en culturele historie. De specifiek onderzoeksvragen in hoofdstuk 2 waren:

- Wat zijn de opvattingen van Chinese en Nederlandse universitaire docenten over de ideale rol van onderzoek in het onderwijs?
- Wat zijn de percepties van Chinese en Nederlandse universitaire docenten van de werkelijke rol van onderzoek in hun onderwijspraktijk?
- Hoe komen de opvattingen van Chinese en Nederlandse universitaire docenten over de ideale rol van onderzoek in het onderwijs overeen met hun opvattingen over onderwijs in het algemeen?
- Hoe hebben de opvattingen en percepties van Chinese en Nederlandse universitaire docenten over de rol van onderzoek in het onderwijs betrekking op hun achtergrondkenmerken?

Het bleek dat zowel Chinese als Nederlandse docenten onderzoeksintegratie in het onderwijs hoog waardeerden, maar ook dat zij lage scores toekenden aan de daadwerkelijke integratie van onderzoek in hun onderwijspraktijk. Beide groepen zagen de ontwikkeling van een creatieve en kritische houding als belangrijk voor studenten, en participatie van studenten in onderzoek als minst belangrijke doel van het integreren van onderzoek in het onderwijs.

Voor zowel de ideale als de ervaren onderwijssituaties, schreven de Nederlandse docenten een beduidend belangrijkere rol toe aan onderzoek in het onderwijs dan hun Chinese collega's. Dit verschil komt eveneens tot uiting in een deelverzameling van Chinese en Nederlandse docenten met eenzelfde opleidingsniveau (Master) die cursussen verzorgen welke niet direct op onderzoek gericht waren. Tevens bleek dat met name voor de Nederlandse docenten gold dat hoe meer onderzoekservaring docenten hadden, hoe sterker ze de rol van onderzoek in het onderwijs waardeerden. Daarentegen bleek onderwijservaring geen waarneembare invloed te hebben op de waardering van de rol van onderzoek voor het onderwijs.

De algemene opvattingen van de docenten over onderwijs waren, zowel voor de Chinese als voor de Nederlandse docenten, voornamelijk gerelateerd aan een voorkeur voor onderwijs gericht op de conceptuele ontwikkeling van studenten en niet voor onderwijs gericht op informatieoverdracht door docenten. De Nederlandse docenten bleken sterker geneigd tot een conceptueel gerichte opvatting over onderwijs en waren het ook vaker oneens over stellingen waarin onderwijs werd gepresenteerd als overdracht van kennis dan de Chinese collega's.

Vervolgens is in dit hoofdstuk beschreven in welke mate de opvattingen van docenten over onderwijs in het algemeen invloed hadden op de manier waarop docenten de rol van onderzoek in het onderwijs waardeerden. Docenten die onderwijs zien als gericht op de conceptuele ontwikkeling van studenten, waarderen de rol van onderzoek in het onderwijs hoger dan docenten die onderwijs opvatten als het overdragen van kennis. Deze trend deed zich voor bij zowel de Chinese als de Nederlandse docenten, maar was sterker bij de Chinese docenten. Opmerkelijk was dat een meer op kennisoverdracht gerichte opvatting van onderwijs niet verhinderde dat docenten de rol van onderzoek in het onderwijs waardeerden.

Institutionele factoren

Hoofdstuk 3 beschrijft een studie over de verschillen en overeenkomsten tussen de opvattingen en percepties van Nederlandse docenten (n = 132) over de rol van onderzoek in het onderwijs. Deze studie beschrijft hoe de institutionele achtergrond (onderzoeksondersteuning en onderzoekscultuur) van universiteiten en van hogescholen, betrekking heeft op de opvattingen en percepties van docenten over de rol van onderzoek in het onderwijs. Tevens werden de resultaten gerelateerd aan de achtergrondkenmerken van de docenten. Er werd een vergelijking gemaakt tussen docenten aan universiteiten en docenten aan hogescholen, omdat deze instellingen aanzienlijk van elkaar verschillen in de rol van onderzoek in het onderwijs, zeker gezien het binaire karakter van het Nederlandse hoger onderwijs. De volgende vragen werden beantwoord:

- Wat zijn de opvattingen van docenten aan universiteiten en aan hogescholen over de ideale rol van onderzoek in het onderwijs?
- Hoe percipiëren docenten aan universiteiten en aan hogescholen de werkelijke rol van onderzoek in de onderwijspraktijk?
- Hoe zijn de percepties van docenten over de werkelijke rol van onderzoek in het onderwijs gerelateerd aan hun institutionele en individuele achtergrond kenmerken?

Gelijksoortige overeenkomsten en verschillen tussen de Nederlandse en Chinese docenten in Hoofdstuk 2 werden ook geconstateerd bij de vergelijking van docenten aan universiteiten en aan hogescholen. De docenten aan universiteiten en

aan hogescholen vertoonden in verschillende opzichten overeenkomsten. Ten eerste waardeerden beide groepen de rol van onderzoek in het onderwijs onder ideale omstandigheden, en was de perceptie van de werkelijke integratie van onderzoek in het eigen onderwijs lager. Ten tweede benadrukten beide groepen docenten de ontwikkeling van een creatieve en kritische houding bij studenten als het belangrijkste doel van onderzoeksintegratie. Ten derde gaven beide docentgroepen aan participatie van studenten in onderzoek het minst belangrijke doel van onderzoeksintegratie te vinden.

Ondanks deze grote overeenkomsten tussen docenten aan universiteiten en docenten aan hogescholen, rapporteerden docenten aan universiteiten aanzienlijk hogere scores voor hun perceptie van de ervaren rol van onderzoek in het onderwijs dan de hogeschooldocenten. De kloof tussen de opvattingen over de ideale en de perceptie van de werkelijke rol van onderzoek in het onderwijs was dan ook beduidend kleiner voor de docenten aan universiteiten dan voor docenten aan hogescholen.

Om meer inzicht te krijgen in de waargenomen verschillen tussen de twee groepen docenten, werden de individuele en de institutionele achtergrondkenmerken van de docenten onderzocht. Naast meer onderzoekservaring werden een hoger opleidingsniveau (PhD ten opzichte van Master) en meer tijdsbesteding in onderzoek gekoppeld aan een meer positieve perceptie van de ervaren integratie van onderzoek in het onderwijs. Hoewel de twee groepen docenten soortgelijke opvattingen vertoonden over institutionele onderzoeksondersteuning, ervoeren docenten van universiteiten een sterkere onderzoekscultuur dan de docenten aan de hogescholen. Samen met de vaststelling dat docenten van universiteiten meer onderzoekintegratie percipieerden in hun werkelijke onderwijs dan de hogeschooldocenten, geven deze bevindingen aan dat institutionele kenmerken een rol spelen in de daadwerkelijke integratie van onderzoek in het hoger onderwijs. Deze conclusie wordt bevestigd door de vaststelling dat zowel de onderzoeksondersteuning als onderzoekscultuur correleren met de perceptie van hogeschooldocenten over hoe goed ze onderzoek kunnen integreren in hun actuele onderwijs. Hoe groter de gepercipieerde onderzoeksondersteuning en hoe sterker de gepercipieerde onderzoekscultuur, hoe meer succesvol de docenten waren met het integreren van onderzoek in de onderwijspraktijk.

Individuele factoren

De Chinese deelverzameling van de onderzoeksgegevens (n = 152) is in **Hoofdstuk 4** verder verkend. Ten eerste om een hiaat in onze kennis over de onderzoeksintegratie in de context van Aziatisch hoger onderwijs te vullen. En ten tweede om te bepalen in hoeverre de Aziatische context, met een ander onderwijssysteem, andere onderwijstradities en andere onderwijsdoelen, mede verantwoordelijk is voor de snelle adoptie van Westerse ideeën over

onderzoeksintegratie in het hoger onderwijs. Dit hoofdstuk richt zich specifiek op de relevantie van de individuele factoren voor de opvattingen en perceptie van docenten over het integreren van onderzoek in het onderwijs. De volgende individuele factoren werden in deze studie onderzocht: onderzoekstijd, onderzoekservaring, type cursus en buitenlandervaring. Daarnaast wordt ook verslag gedaan van institutionele achtergrond factoren, zoals onderzoeksintensieve ten opzichte van niet-onderzoeksintensieve instelling, en belemmerende factoren gerapporteerd door de docenten. De volgende twee onderzoekvragen stonden centraal:

- In welke mate hebben de opvattingen van docenten over de ideale rol van onderzoek in het onderwijs betrekking op hun perceptie van de werkelijke rol van onderzoek in de onderwijspraktijk?
- In welke mate hebben de achtergrondvariabelen van docenten betrekking op hun perceptie van de werkelijke rol van onderzoek in de onderwijspraktijk?

Reeds in Hoofdstuk 2 werd een groot verschil gerapporteerd tussen de opvattingen van Chinese docenten over de ideale rol van onderzoek in het onderwijs en hun perceptie van de werkelijke rol van onderzoek in hun eigen onderwijs. Met behulp van deze studie kunnen we de kloof, ervaren door de Chinese docenten, beter begrijpen. Overeenkomstig de bevindingen in Hoofdstuk 3, blijken docenten die meer positief staan tegenover de rol van onderzoek in de onderwijspraktijk vaker afkomstig van onderzoeksintensieve universiteiten en hebben relatief meer onderzoekservaring en meer tijd voor onderzoek dan de docenten die minder positief tegenover de rol van onderzoek in de onderwijspraktijk staan.

Twee andere achtergrondfactoren werden ook onderzocht in dit hoofdstuk: het type cursus dat wordt onderwezen door de Chinese docenten (taal ten opzichte van niet-taal majors) en buitenlandervaring van de docenten. Alhoewel we zouden verwachten dat deze achtergrondfactoren gerelateerd zijn aan de opvattingen van docenten, bleken beide factoren geen wezenlijke relatie te hebben met de opvattingen over de ervaren onderzoeksintegratie in het onderwijs.

Opvallend in dit hoofdstuk is dat de Chinese docenten zelf bijkomende factoren noemden, die bijdroegen aan de geobserveerde kloof tussen de ideale en de ervaren onderzoeksintegratie. Docenten gaven onder andere gebrek aan tijd, zware onderwijslast en de vaste curricula als factoren aan. Gebrek aan motivatie van studenten en onvoldoende taalbeheersing van het Engels werden ook genoemd. Tevens werden het gebrek aan motivatie van de docenten om onderzoek te integreren en een lage sociale status van taalinstructie binnen de instelling genoemd.

Interview studie: Begeleiding van masterscripties

De resultaten van de vragenlijststudie gaven een algemeen overzicht van de opvattingen van docenten over de rol van onderzoek in het hoger onderwijs. De resultaten van de interviewstudie, beschreven in **hoofdstuk 5**, vullen dit aan met een meer kwalitatief en gedetailleerd beeld. De context van de begeleiding van de masterscriptie werd gekozen voor deze studie om de volgende redenen. Ten eerste zijn in de meeste van de deelnemende instellingen masterscriptie programma's relatief gelijksoortige onderwijsleeractiviteiten. Ten tweede is in de scriptiebegeleiding een grote variatie aanwezig in doelen en onderwijsaanpakken met betrekking tot onderzoeksintegratie. En ten derde kan de context van scriptiebegeleiding, met de focus op onderzoek, de invloed van verschillende beperkingen met betrekking tot de integratie van onderzoek in de onderwijspraktijk verminderen. Tien Chinese en tien Nederlandse scriptiebegeleiders van onderzoeksintensieve universiteiten uit de geesteswetenschappen werden geïnterviewd. De volgende onderzoeksvragen stonden daarbij centraal:

- Welke leerdoelen willen Chinese en Nederlandse begeleiders bereiken met hun masterstudenten via de masterscriptie?
- Hoe ondersteunen Chinese en Nederlandse scriptiebegeleiders hun masterstudenten bij het bereiken van de leerdoelen?

Met betrekking tot de leerdoelen die begeleiders wilden bereiken, kwamen vijf hoofdcategorieën voort uit de data: 1) ontwikkelen van onderzoekscompetenties, 2) ontwikkelen van algemene competenties, 3) verhogen van de waarde van studentonderzoek, 4) verbeteren van het welzijn van studenten, en 5) voorbereiding op toekomstige loopbanen. De Chinese en de Nederlandse begeleiders benoemden gelijksoortige leerdoelen die zij belangrijk vonden voor hun studenten. De ontwikkeling van onderzoekscompetentie van studenten werd door zowel Chinese als Nederlandse begeleiders als belangrijkste leerdoel van masterscriptieonderwijs benoemd. Hoewel de Chinese begeleiders gericht waren op het stimuleren van een kritische houding en academisch schrijven, waren de Nederlandse begeleiders ook gericht op het aanleren van onafhankelijk doen van onderzoek en het verhogen van de motivatie van studenten voor onderzoek. De Chinese begeleiders waren, naast de ontwikkeling van algemene vaardigheden van studenten, vooral ook gericht op de taalvaardigheid van studenten en de voorbereiding op toekomstige beroepen. Daarentegen spraken de Nederlandse begeleiders vaak over de potentiële bijdrage van studenten aan de kennisbasis van de discipline en over het bevorderen van het welzijn van studenten. De Chinese en de Nederlandse begeleiders verschilden verder in hun voornemen om studenten voor te bereiden op toekomstige loopbanen. De Nederlandse begeleiders benoemden enkel de relevantie van de masterscriptie voor de verdere persoonlijke

ontwikkeling van studenten. Sommige Nederlandse begeleiders stelden zelfs expliciet dat het doel van een masterscriptie niet was om voor te bereiden op toekomstige carrières, terwijl alle tien de Chinese scriptiebegeleiders grote betrokkenheid toonden in deze richting.

Met betrekking tot de tweede onderzoeksvraag over de ondersteuning door begeleiders kwamen twee hoofdcategorieën uit de interviewdata naar voren, namelijk zichtbare en verborgen ondersteuning. Concreet verwijst zichtbare ondersteuning naar de directe inhoud en ondersteunende activiteiten. Zes subcategorieën van zichtbare ondersteuning werden onderscheiden en bleken te variëren van studentengerichte activiteiten tot docentgerichte activiteiten: aandragen van materialen, directe uitleg, voordoen, discussie, vraag stellen en tussentaken geven. Verborgen ondersteuning was niet rechtstreeks gerelateerd aan expliciete inhouden of activiteiten. Vier subcategorieën van verborgen ondersteuning kwamen voor in de data: adaptieve begeleiding, evaluatie- en controlemethoden, emotionele ondersteuning, en toewijding van de docent.

Uit de interviewresultaten bleek dat zowel de Chinese als de Nederlandse scriptiebegeleiders verschillende soorten begeleiding gebruikten. Beide groepen begeleiders noemden het expliciet aandragen van materialen en het aanbieden van tussentaken voor studenten als de meest voorkomende vorm van zichtbare ondersteuning, naast adaptieve begeleiding als de meeste voorkomende vorm van verborgen ondersteuning.

Verschillen werden ook duidelijk in de begeleidingspraktijk van de Chinese en de Nederlandse begeleiders. De twee groepen verschilden in de mate van gebruik van de verschillende ondersteuningsvormen, de manier waarop ze de verschillende vormen combineerden, en de manier waarop specifieke vormen van ondersteuning werden gebruikt. Met betrekking tot de verborgen ondersteuning gaven de Chinese begeleiders aan vaak gebruik te maken van expliciete evaluatie- en controlemethoden, terwijl de Nederlandse begeleiders vaker aangaven gebruik te maken van impliciete controlemethoden en een nadruk op emotionele ondersteuning. Met betrekking tot de zichtbare ondersteuning verschilden de Chinese en de Nederlandse begeleiders het meest in het gebruik van vragen. De Nederlandse begeleiders gaven aan dat ze bewust nalieten om directe antwoorden te geven op de vragen van studenten en kozen expliciet voor het stellen van samenhangende vragen om geleidelijk het begrip van de studenten te verbeteren. Tevens rapporteerden de Nederlandse begeleiders vaak dat ze studenten vroegen om hun ideeën te onderbouwen en uit te leggen hoe ze deze in de praktijk wilden brengen. De Chinese begeleiders gaven minder vaak dan de Nederlandse begeleiders aan dat ze gebruik maakten van het stellen van vragen aan studenten, maar rapporteerden dat ze voor begeleidingsgesprekken vragen aan studenten meegaven ter voorbereiding.

Algemene conclusies en discussie

In **Hoofdstuk 6** zijn de resultaten van de studies geïntegreerd om algemene conclusies te trekken over de integratie van onderzoek in onderwijs in het Chinese en het Nederlandse hoger onderwijs.

In het algemeen bleken de Chinese en de Nederlandse docenten meer overeen te stemmen dan te verschillen. Beide groepen waardeerden de rol die onderzoek zouden moeten spelen in het hoger onderwijs en bij beide groepen bestond een kloof tussen de ideale en ervaren rol van onderzoek in het onderwijs. Verder waren beide groepen meer geneigd tot een onderwijsopvatting gericht op de conceptuele verandering van studenten in plaats van onderwijs dat louter gericht is op kennisoverdracht door de docent. Belemmerende factoren, zowel in de institutionele achtergrond (zoals onderzoeksintensieve- versus onderwijsintensieve instellingen) als in de individuele achtergronden (zoals opleidingsniveau en onderzoekervaring) bleken als verklaring voor de gepercipieerde kloof tussen ideaal en de actuele onderwijspraktijk te kunnen dienen.

De Chinese en Nederlandse docenten kwamen ook sterk overeen in hun visie op de belangrijkste leerdoelen bij de scriptiebegeleiding (zoals ontwikkeling van onderzoekscompetenties en ontwikkeling van een kritische houding). De twee groepen docenten combineerden beiden zichtbare ondersteuning met verborgen ondersteuning. Kenmerkend voor de zichtbare ondersteuning van zowel de Chinese als de Nederlandse scriptiebegeleiders was de combinatie van docentgerichte ondersteuning en studentengerichte ondersteuning.

Ondanks deze overeenkomsten werden ook opmerkelijke verschillen gevonden tussen de Chinese en Nederlandse docenten. Over het algemeen waren de Nederlandse docenten positiever over de daadwerkelijke onderzoeksintegratie in hun eigen onderwijs dan de Chinese docenten. De Nederlandse docenten waren ook sterker geneigd tot een onderwijsopvatting gericht op conceptuele verandering van studenten dan de Chinese docenten. Een dergelijke oriëntatie bleek sterk positief geassocieerd met de perceptie van de docenten over de werkelijke rol van onderzoek in hun eigen onderwijs. Er waren ook duidelijke verschillen tussen de Chinese en de Nederlandse docenten met betrekking tot de uiteindelijke leerdoelen bestemd voor hun studenten. Chinese docenten waren meer gericht op de voorbereiding op toekomstige loopbanen, terwijl Nederlandse docenten meer gericht waren op het welzijn van studenten en op de kennisbijdrage aan het de discipline. De Chinese en de Nederlandse scriptiebegeleiders verschilden het meest in specifieke vormen van ondersteuning. Zo gebruikten Chinese docenten vaker evaluatie- en controlemethoden, terwijl Nederlandse docenten aangaven meer emotionele ondersteuning te bieden en gebruik te maken van het stellen van vragen aan de studenten.

De overeenkomsten tussen de Chinese en Nederlandse docenten kunnen begrepen worden in het licht van de groeiende invloed van het Westerse hoger

onderwijs op het Aziatische hoger onderwijs. Veel belemmerende factoren zijn ook te verklaren vanuit de ervaren kloof tussen het ideaal en de actuele onderwijspraktijk bij de onderzoeksintegratie door de Chinese en de Nederlandse docenten. De belemmerende factoren werden opgedeeld in culturele, institutionele en individuele achtergrondkenmerken van de docenten. Hoewel beide groepen een vergelijkbare kloof ervaren, verschilden de Chinese en de Nederlandse docenten in de ervaren beperkingen. Een gebrek aan ondersteunend onderzoeksklimaat was de belangrijkste belemmerende factor voor hogeschooldocenten in Nederland, terwijl de Chinese docenten geconfronteerd werden met een gepercipieerde mismatch tussen wat onderzoeksintegratie in het onderwijs kan bereiken en de doelstellingen van het verbeteren van talenkennis in het huidige Chinese taalonderwijs.

De sterke kanten en de beperkingen van het onderzoek worden beschreven aan het slot van dit proefschrift. Op basis van deze informatie zijn vervolgens drie aanbevelingen gedaan. Ten eerste zou toekomstig onderzoek naar de relatie tussen onderzoek en onderwijs gebruik moeten maken van instrumenten die zowel de huidige onderwijspraktijk alsook de opvattingen van docenten in kaart kunnen brengen. Ten tweede zouden managers, beleidsmakers en docenten bewust moeten worden gemaakt van de kloof die bestaat tussen wat docenten denken over de ideale onderzoeksintegratie in het onderwijs en de feitelijke onderwijspraktijk. Hoger onderwijsinstellingen zullen de culturele, institutionele en individuele achtergrondfactoren moeten identificeren die de onderzoeksintegratie in onderwijs belemmeren om onderzoeksintegratie in het onderwijs te bevorderen. De verschillende belanghebbenden in onderzoeksintegratie in het hoger onderwijs moeten worden aangemoedigd om in een dialoog met elkaar belemmerende factoren aan te pakken. Ten slotte is het raadzaam dat de overeenkomsten en verschillen tussen de Chinese en de Nederlandse scriptiebegeleiders gebruikt worden om begeleiders van studenten te helpen met het verbeteren van onderwijs aan internationale studenten van verschillende culturele achtergronden, in het bijzonder voor Westerse begeleiders van Chinese studenten. Begeleiders hoeven niet per definitie hun actuele begeleiding aan te passen aan de specifieke culturele achtergronden van hun studenten, maar kennis van de gepresenteerde overeenkomsten en verschillen kan helpen de sterke punten en moeilijkheden van hun studenten te identificeren en impliciete verwachtingen te verduidelijken, om zo het maximale leerresultaat voor hun studenten te behalen.

Appendices

Appendix 1

The three main sections of the survey on the role of research in university teaching

Section 1 Institutional research culture and research support

Item		Scale
1.	We have opportunities to learn about current research (through official publications, journals, books, conference papers, websites etc.).	RSu
2.	The management encourages us to become involved in research.	RSu
3.	The common belief is that research competencies help students to become better employees later.	RC
4.	We are supported to attend research activities such as conferences, symposiums	RSu
5.	Most of us consider research important.	RC
6.	The general opinion is that research can enhance the credibility of an institution.	RC
7.	We are given support to improve our research competencies (through workshops, seminars etc.).	RSu
8.	Conducting research is viewed as important in our institute.	RC
9.	In our institute, it is generally believed that including research in university education is important.	RC

Note. RSu = research support; RC = research culture. Each item is rated on a five-point Likert scale ranging from 1 = 'almost never' to 5 = 'almost always'.

Section 2 Goals of including research in teaching

Item	*Ideally* in my teaching I would… Almost never				Almost always	In my *actual* teaching practice I… Almost never				Almost always	Scale
… stimulate students to learn about research findings.	□	□	□	□	□	□	□	□	□	□	RoR
… value students' contribution to research.	□	□	□	□	□	□	□	□	□	□	SaP
… motivate students to learn more about the discipline.	□	□	□	□	□	□	□	□	□	□	SRI
… develop students' critical attitude.	□	□	□	□	□	□	□	□	□	□	CritD
… increase students' ability to analyze complex situations.	□	□	□	□	□	□	□	□	□	□	RSk
… teach students to pay attention to the way research is carried out.	□	□	□	□	□	□	□	□	□	□	RoR
… consider students' participation in research important.	□	□	□	□	□	□	□	□	□	□	SaP
… increase students' enthusiasm about the scientific world.	□	□	□	□	□	□	□	□	□	□	SRI
… stimulate students not to be easily satisfied with an explanation.	□	□	□	□	□	□	□	□	□	□	CritD
… increase students awareness of the need to be creative.	□	□	□	□	□	□	□	□	□	□	CreaD
… make the scientific research process an essential part of the curriculum.	□	□	□	□	□	□	□	□	□	□	RoR
… ask students to make a contribution to research.	□	□	□	□	□	□	□	□	□	□	SaP
… increase students' awareness of the research issues currently being discussed.	□	□	□	□	□	□	□	□	□	□	CR
… encourage students' interest for research.	□	□	□	□	□	□	□	□	□	□	SRI
… stimulate students to read scientific literature critically.	□	□	□	□	□	□	□	□	□	□	CritD
… foster students' sense of innovation.	□	□	□	□	□	□	□	□	□	□	CreaD
… develop students' research skills.	□	□	□	□	□	□	□	□	□	□	RSk
… pay attention to research methodology.	□	□	□	□	□	□	□	□	□	□	RoR
… involve students in scientific studies.	□	□	□	□	□	□	□	□	□	□	SaP
… show students the kind of studies carried out in areas related to languages.	□	□	□	□	□	□	□	□	□	□	CR
… stimulate students to ask critical questions about their work.	□	□	□	□	□	□	□	□	□	□	CritD
… make links to the current research practices.	□	□	□	□	□	□	□	□	□	□	CR
… encourage students to have opinions of their own.	□	□	□	□	□	□	□	□	□	□	CreaD
… increase students' ability to conduct research.	□	□	□	□	□	□	□	□	□	□	RSk

Note. RoR = reflection on research; SaP = students as participants; SRI = student research interests; CritD = critical disposition; RSk = research skills; CreaD = creative disposition; CR = current research in the domain.

Section 3 Beliefs about teaching

Item		Scale
1.	I design my teaching with the assumption that most of the students have very little prior useful knowledge of the topics.	ITTF
2.	I feel it is important that course content should be described completely in terms of specific objectives relating to what students have to know for formal assessment.	ITTF
3.	In my interactions with students I try to develop a conversation with them about the topics we are studying.	CCSF
4.	I feel it is important to present a lot of facts to students so that they know what they have to learn.	ITTF
5.	I feel that the assessment should be an opportunity for students to reveal their changed conceptual understanding of the subject.	CCSF
6.	I set aside some teaching time so that the students can discuss among themselves the difficulties that they encounter in studying the subject.	CCSF
7.	I concentrate on covering the information that might be available from a good textbook.	ITTF
8.	I encourage students to adopt new ways of thinking about the subject.	CCSF
9.	In the teaching sessions I use challenging examples in order to provoke debate.	CCSF
10.	I structure my course in such a way as to help students to pass the formal assessment.	ITTF
11.	I think an important reason for running teaching sessions is to give students a good set of notes.	ITTF
12.	I only provide the students with the information they will need to pass the formal assessments.	ITTF
13.	I feel that I should know the answers to any questions students may put to me.	ITTF
14.	I offer students opportunities to discuss their changing understanding of the subject.	CCSF
15.	I feel that it is better for students to generate their own notes rather than always copy mine.	CCSF
16.	I feel a lot of teaching time should be used to discuss students' ideas.	CCSF

Note. ITTF = information transmission /teacher focused; CCSF = conceptual change /student focused. Questions in this section were adapted from the Approaches to Teaching Inventory by Trigwell and Prosser (2004). Each item is rated on a five-point Likert scale ranging from 1 = 'only rarely' to 5 = 'almost always'.

Appendix 2

Coding scheme and examples for intended learning outcomes identified by supervisors of master's theses

Core category	Description	Sample quote
Research competencies	These codes are assigned when supervisors mention research competencies such as the ability to choose a research topic, critically read the academic literature, acquire research skills, design and conduct research, analyse the data, write and present findings, develop thinking and/or research interests.	Most importantly, students need to develop their own way of thinking. This means that, given a problem, the student should first decide whether it is a problem, then whether it is worth researching and from which aspects to start with. C4
General competencies	These codes are assigned when supervisors talk about general competencies which students need to acquire during the process of writing a thesis: general knowledge, language abilities, social and communication abilities, logical thinking, a general critical attitude and so forth. Some of the competencies (e.g., a general critical attitude) can transfer from research competencies.	Students have to know how to search for information via the internet. This will be a necessary ability in the future. If a graduate student cannot effectively screen information, then I did not achieve my supervising goal. C1
Value of student research	This code is assigned when supervisors mention that they would like their students to make a research contribution, to make their research or thesis meaningful and to publish good-quality papers.	I encourage them to publish in good quality journals, and it must be journals on the CSSCI [China Social Science Citation Index] list. C9
Student well-being	This code is assigned when supervisors mention wanting their students to be happy and satisfied with the thesis or thesis process; wanting to build student confidence, self-esteem and sense of achievement; wanting to develop the potential of students; and so forth.	They have a talent or abilities and that they can develop those talents here, to their best. And that they are not frustrated because they have the feeling that they could have done much more or much better and that we prevented them from doing that. D4
Preparation for future job	This code is assigned when the teacher mentions the intention or expectation that they prepare students for a future career.	It is still worth encouraging students to attend conferences. There are many potential job opportunities. C3

Appendix 3a

Coding scheme and examples for tangible support identified by supervisors of master's theses

Subcategory	Description	Sample quote
Teacher resources	This code is assigned when the teacher shares resources or ideas which belong to the teacher or are only accessible to the teacher. For example, a teacher may directly give students materials or recommend materials and research topics; find research questions for students; offer their expertise; and revise student texts. Supervisors may also put students in contact with another expert.	I will provide them with lots of databases from foreign countries. C9
Tell or lecture	This code is assigned when supervisors tell students how to read, write or conduct research. It is about instructions and prescriptions.	I tell them 'When you read literature, those short academic papers, you should study how they wrote the articles. C7
Teacher modelling	This code is assigned when supervisors make themselves examples and/or show students how to do research, how to write, how to analyse data, and so forth. This code is also sometimes assigned for mention of modelling from research articles, journal papers or previous theses.	Of course you have to 'teach by words and influence by deeds'. You have to make example for them, showing them how to collect literature in various ways. C2
Discussion	This code is assigned when supervisors mention discussion, chatting or other types of interaction with students during the process of thesis supervision.	I'll look at it and then we'll discuss it together. And we also, once they have produced two or three pieces, discuss how it fits together into the final product. D3
Posing questions	This code is assigned when supervisors mention asking questions to— for example — help students cope with difficulties or keep on track.	So I help them a lot with the research section, like what is the question, how are you going to analyse it, how are you going to do this. D6
Student tasks	This code is assigned when supervisors mention giving students tasks, assignments or something else in relation to the writing of the master's thesis. Often a certain type of output or product is required from the student(s) by the teacher in such cases.	The first thing is for students to find relevant materials according to their needs, including treatises, magazines and journal articles. For example, I also let students read publications from abroad. That is to let them read extensively. C8

Appendix 3b

Coding scheme and examples for intangible support identified by supervisors of master's theses

Subcategory	Description	Sample quote
Assessment and control	This code is assigned when the supervisors mention their methods of assessment or making sure that students are doing what they should, in the right way or in the way that the supervisor or student wants it done. The code is also assigned when adherence to the time frame, schedule or planning is mentioned.	Do not let me find out that they did not find every reference. I will be very angry then. If I sense that they did not find all of the literature…the basis is not sufficient, then they will have to redo it. C10
Adaptive supervision (differentiation)	This code is assigned when supervisors mention adapting their supervision to student's motivation, abilities, progress, circumstances, interests and teacher's own expertise.	As a teacher, one has to be very sensitive to students interests. For many, academic achievement can bring them lots of pleasure and they will participate more in the process. I probably take note of these characteristics and let him do more things. C9
Emotional support	This code is assigned when supervisors mention trying to ease student worries, encouraging them and demonstrating confidence in them. It is also assigned when supervisors show understanding for their students (e.g., for student concerns, pressures, reasons for doing things in a particular manner). The code often applies to teacher actions aimed at affecting student feelings.	Rather than tell them 'oh that's all wrong', I say 'Good! Just collect more on this, collect more on that, collect more on that, and then you later need to try to put it together. D6
Teacher dedication	This code is assigned when supervisors mention devoting extra time to thesis supervision, close involvement with student research and enthusiasm about student research.	Because it takes too much time. I only have… I don't know how much time I officially have for supervising a thesis, but not that much. So if you want to do it, I want them to learn something from it. D2

Publications and presentations

Scientific publications

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (2014). 'And never the two shall meet'? Comparing Chinese and Dutch university teachers about the role of research in teaching. *Higher Education.* doi: 10.1007/s10734-014-9734-0.

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (in press). The role of research in teaching: A comparison of teachers from research universities and those from universities of applied sciences. *Higher Education Policy*.

Manuscripts submitted for publication

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (under review). What does it mean to supervise a master's thesis? A comparison of Chinese and Dutch practices.

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (under review). The role of research in teaching: A case study of Chinese university teachers.

Symposia and individual paper presentations

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (2012, November). *Chinese and Dutch university teachers' beliefs about the role of research in their teaching*. Paper presented at the ICO Fall School 2012, Girona, Spain.

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (2012, December). *Chinese and Dutch university teachers' beliefs about the role of research in their teaching.* Paper presented at the Newer Researchers Conference of Society for Research into Higher Education (SRHE), New port, UK.

Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (2013, August). *How research and teaching are related in master thesis supervision? Comparing Chinese and Dutch supervisors.* Paper presented at the Junior Researchers (JURE) pre-conference, Munich, Germany.

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Hu, Y., van der Rijst, R. M., van Veen, K., & Verloop, N. (2014, April). Asian and Western university teachers' beliefs about the role of research in teaching. In M. Mulder & A. Kezar (Chairs), *Barriers and facilitators of integrating research in higher education*. Symposium conducted at the annual meeting of American Educational Research Association (AERA), Philadelphia, USA.

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Poster presentation

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Curriculum Vitae

Yanjuan Hu was born on 8th August 1983 in Sichuan, China. After taking the National College Entrance Examination in 2003, she entered Chongqing University. She obtained a bachelor's degree in English and a second bachelor's degree in Business Administration in 2007. She then continued with a master's study in Applied Linguistics and obtained this in 2010 from Chongqing University. In this same year, she was awarded a CSC grant to pursue a PhD at ICLON, Leiden University, the Netherlands. In her doctoral research, she compared Chinese and Dutch university teachers with regard to the role of research in their teaching. She attended master classes provided by ICO, the Dutch Interuniversity Centre for Educational Research, including classes on Teaching and Teacher Education, Qualitative Research Methodology and Research into Higher Education. She has presented her work at national and international ICO Fall Schools and at several international conferences (SRHE, EARLI, AERA).

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